June 2001
Volume 69 No 6

Amateur Radio

WIRELESS INSTITUTE OF AUSTRALIA

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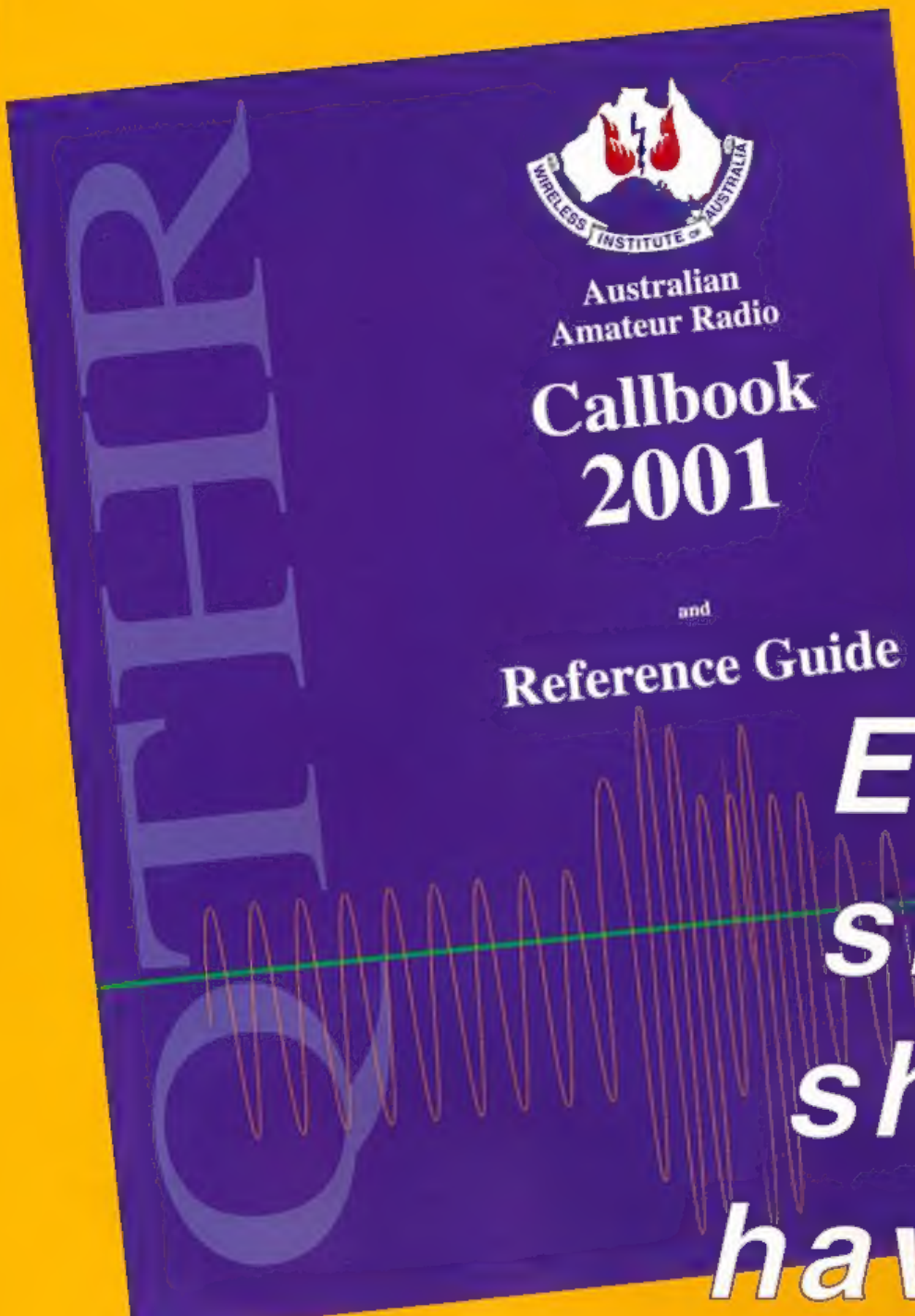

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General

Technical

Columns

Our cover this month

Main picture: James O'Hare ZL3501 is 15 years old and winner of the Oceania SWL category.

Insets: (left) New WIA President Ernie Hocking VK1LK; (right) Outgoing Peter Naish VK2BPN presents former AR editor Bill Rice VK3ABP with the Higginbotham Award for his Service to AR and Publications

Contributions to Amateur Radio
Amateur Radio is a forum for WIA members' amateur radio experiments, experiences opinions and news. Manuscripts with drawings and or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, How to write for Amateur Radio is available from the Federal Office on receipt of a stamped self-addressed envelope.

Back Issues
Back issues are available directly from the WIA Federal Office (until stocks are exhausted), at $4.00 each (including postage within Australia) to members.

Photostat copies
When back issues are no longer available, photocopies of articles are available to members at $2.50 each (plus an additional $2 for each additional issue in which the article appears).

Disclaimer
The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

Amateur Radio Service

A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

Wireless Institute of Australia

The world's first and oldest
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Founded 1910

Representing
The Australian Amateur Radio Service

Member of the
International Amateur Radio Union

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Editorial Comment

Colwyn Low VK5UE

Well the WIA is certainly filling the BBS and email lists with info. Now we have to make sure it is the info we need.

The new Directors are settling down in their jobs and we will see things have changed a bit different in the coming months.

I was interested to read in the Bulletin of 6th February an article on Amateur Radio on page 64 called "Ham is where the heart is". I wonder how hard it would be to get similar exposure in an other National magazine? This is why we need a Federal PR Coordinator

Amateur Radio magazine is being looked at to see if it can be improved. Now to some that means content, to others the quality of the paper and the presentation of photographs and diagrams. I feel the starting point has to be 'What are we trying to do publishing a magazine for members?" If the prime purpose is to provide members with information and to be a forum to exchange ideas then it could be argued that we do not need the highest quality paper and the highest resolution photographs. In the end members pay for what they get. So they have to decide if any extra expense in publishing the magazine in a different form is justified.

This month we have had to catch up on the results of some of our contests. You will see that the Oceania contest results show a large number of entries worldwide. We need to remember we are DX to a lot of operators and so contests like the Oceania one give non VK and ZL operators a chance to find VKs and ZLs easily. Please give them some more opportunities this year in October.

I am having an easier life the last few months. You have provide more input and I can now plan a month or so ahead. This should help set and keep a 'post in Melbourne by 1st of the month of issue' schedule. Hopefully this June issue gets to you by 10th June.

I still need to remind you that we need material to publish in AR. Technical articles are not as numerous as General articles. So what about some articles on ATV and UHF/SHF equipment.

The Mt Ginini article should have had a few more photos but I was sent 35Mb of photos in successive email on the same day. It overflowed my ISP mailbox allocation of 20Mb; it filled my 1Gb HDD and took 3.5 hours to down load over three days. I had to strip and rebuild the HDD. Please if you have this much data send it on a CD. Express Post gets to me in a day from all Capital City areas. From the fragments I did see there were some good photos of working in the wind and rain.

I have acquired a small, solar panel, about 6W 12V which might let me run an HW7 in a field day on solar power. Anything for a change !!! What have you got up to?

Colwyn VK5UE

New WIA Members

The WIA bids a warm welcome to the following new members who were entered into the WIA Membership Register during the month of March 2001

L21185 MR A BALLANTINE	VK2HUP MR J FEGAN
L21186 MR G B WOODWARD	VK3DJM MR J H MILLER
L21187 MR M FAED	VK4OC MR D S A PEAKE
L60XXX MR R C W JUNCKERSTORFF	VK7ZAC MR A CORDWELL
	VK8GW MR G T WOODS

WIA Comment

Ernest Hocking VK1LK

Introducing the President

Ernest Hocking VK1LK

Amateur Radio means many different things to many different people. Like many, when I first became interested in amateur radio I thought the hobby was about listening to radio transmissions and once qualified being able to respond to them. It was not until I first came into contact with my local radio club that I discovered that of the greatest joys was being able to interact with others in all aspects of our hobby. Through this club I met others with similar interests and as a result greatly improved my understanding of a wide number of aspects of radio. I also remember thinking that at some time in the future I would like to be able to provide the same sort of help to others.

Given my experience it then seemed only natural to volunteer when these opportunities arose. Since my time here in Australia I have participated in the activities of the local VK1 Division initially as the TAC and subsequently as divisional treasurer. Through these activities I came to learn about the Federal organisation of the way in which it worked. When the call for volunteers to assist in the Federal arena it seemed natural to volunteer to assist.

Something about myself

One of the questions that I have already been asked is several times is "Can you tell us something about yourself?" so here goes:

I was born in 1959 in the Devon in the South West of England. After finishing at Bideford Grammar School I went to the University of Sussex where I studies Mathematics and Physics. During my last year I decided that a career in the Army would be a great opportunity to experience a little life before settling down to a "normal" career. After some exciting times at Sandhurst and Aldershot I was commissioned into the Parachute Regiment where I discovered, in the Falklands in 1982, that the Army wasn't all about sports and adventure training. In 1984 I transferred to the Royal Corps of Signals in order to work more with my interests in communications and IT.

After a number of years with the Signals I decided that my interest in IT was great enough to justify returning to University at York in order to take a Master's Degree in IT. This was followed by a three-year stint doing research for the Royal Signal's Research Establishment (RSRE – the UK equivalent of DSTO) into secure computer systems. This led to a period working as a consultant for a local consulting company before spending a number of years working in Luxembourg on computer security issues for Cedel Bank. I moved to Australia in 1996 where I have spent time working as a consultant on a number of projects including a 6 month spell at the ACA before joining Sun Microsystems in late 2000.

Immediate plans

There are a number of things that I see as immediate issues that need to be done as a pre-cursor to moving forward. These include:

Communication. Listening to the members. As communicators I often hear it being said that we do not effectively communicate with each other. In the past; technology restrictions made it impractical to easily communicate effectively. This is no longer the case and most of us have ready access to the Internet and the opportunity to get our message across. I propose to make good use of this, and any other medium, in order to listen to what amateur have to say about our hobby and to communicate to all amateur what the WIA is doing for them.

WIA plan for the next year. The current directors are all new to their positions. As a priority we need to determine long term objectives of the WIA, assign individuals to roles, and define the budgetary requirements needed to meet these objectives. This process will be helped by the views of all amateurs—but please act quickly since we have to consolidate our plans quickly.

Budgetary Issues. The Federal Council already has a proposal in front of it to consider an increase in membership fees to cover increased costs in the production of AR. This proposed increase is not as some have suggested just to increase the print quality of the current magazine but rather to reflect a number of factors such as reducing circulation numbers, increased production costs and reduced advertising revenue. Whilst none of us want to see an increase in price we may have to impose this if we are to maintain the magazine in the short term. In the longer term there are a number of options that we might wish to investigate. I will have more to say about this in future articles.

Future examination and licencing arrangements. As you have already heard by now the ACA has issued a paper seeking proposals about the

Continued on page 5

The Federal WIA Convention 2001

This Report was sourced from QNews. It is one person's view of the Convention and is not the official minutes. It is published to provide all members with an overview of the Federal Convention. Colwyn VK5UE Editor
The following is extracted from a lengthy report from the VK4 Federal Councilor David Jones VK4OF what might be termed *"Reflections on the 65th Federal Convention of the WIA."*

The meeting opened at 0900 Saturday, with WIA President, VK2BPN Peter Naish in the chair. WIA Director John Loftus, VK4EMM conducted a workshop on accounting methods and ways of assessing the performance criteria of certain aspects of a business example. This education was very well received, and allowed everyone to better appreciate the increased complexity of company accounts.

Of the 18 Divisional Motions some were withdrawn, as they are often unintentionally worded in such a way as to possibly create new WIA policy, when a change in operation or attitude is all that is needed to effect the desired outcome. The conducting of a market survey moved by VK3 was approved and the debate generated many useful ideas. The motions (1) to establish of a national bookshop and a QSL service were withdrawn, however VK2 has offered to extend its Bookshop services to any member of any division and are looking at the commercial aspects of handling QSL cards for other divisions. (2) to establish a national News Service, by VK4 was withdrawn. QNEWS is now officially made available to any division which requests it, and the WIA Federal President or his nominee will appear at least monthly. QNEWS will co-ordinate same, record the interviews, and distribute them to other divisional news services if required.

What many WIA Divisional members saw as "the big one", the discussion of Martin Luther's restructuring paper, along with the VK4 restructuring ideas were both withdrawn, then discussed in open committee for over an hour on Sunday morning. Basic issues are that any change could be very expensive, with no guarantees of success. General agreement was to work towards far better communication between divisions and to members and non-members alike. Use of federal president on news will also help to spread the word.

Reports to Council numbered 26, including some very detailed and expansive ones. For example, Grant Willis's IARU Region III Report was initially 60 pages! Importantly, there are two WRC's coming up, the first in Venezuela in 2003, and another in 2006. Plus IARU Region III conferences. We need to finalise a team of two for both but given our current level of funding at $2.00 per member, we will be out of funds by the end of 2003. The solution, more from more members. The WIA did not support the IARU Region III proposal to restrict the 10 MHz operation to FSK and CW only. ARDF, in-principle support for the hosting of the Region III Championships in 2003. WIA/ACA Liaison Committee and Gilbert VK1GH will progress the 40m gateway issue. This has repercussions for people in small lot developments who cannot install antenna arrays.

Grant VK5ZWI makes a point during the IARU Session

Elections: Executive: President: Ernest Hocking, VK1LK. Directors: David Pilley, VK2AYD Don Wilschefski, VK4BY Brenda Edmonds, VK3KT Secretary: Peter Naish, VK2BPN: Editor AR: Colwyn Low, VK5UE: WIA/ACA Liaise Gilbert Hughes, VK1GH Keith Malcolm, VK1ZKM Peter Naish, VK2BPN Richard

Martin Luther VK5GN and David Pilley VK2AYD during a debate

Serious business! VK3 delegation: Jim VK3PC (Federal Councillor), Brenda VK3KT and Peter Mill (3rd Alternate Councillor)

David Jones VK4OF receives the RD Trophy 2001/2 from Peter Naish

Jenkins, VK1RJ (ipso facto). All other ex-officio positions were reconfirmed.

G A Taylor Award. It was agreed on secret ballot to award the G. A. TAYLOR Medal to Neil Penfold, VK6NE, for over 30 years of service to the WIA in a variety of capacities.

David VK4OF said " This was by far the most productive, pleasant and exhausting meeting I have ever attended which currently number about 12. There was no petty 'playing of business meetings', no character assassinations, nothing except a great spirit of co-operation and a willingness on the part of all to work together for the common good of the WIA and the Amateur Radio Service it represents. Conferences such as this deserve far more publicity than they ever receive, and the members of each division need to be assured that they really get their membership money's worth from their well-prepared delegates. If we can expand the principle of communications across the divisions, learn from each other's successes and failures, this will progress the WIA in a way that will likely eliminate the need for any restructuring, at least in the short term. When we add greater emphasis on communicating the message to all the amateurs across Australia, including having the Federal President on news broadcasts, I am sure we can make a serious start towards rebuilding the membership base."

The new Federal President, VK1LK, in a press statement released by the VK1 Division said in part "I want people to contact me, but they have to realise that there are limits. Email me, or expect to reach an answering machine and then I'll deal with matters in my own time." The contacts are:
ernest.hocking@aus.sun.com
04 1230 2576 Fax-(02) 6257 2664.

John Loftus, proud recipient of the Frank Hine Trophy

Introducing the President

Continued from page 3

amateur examination, and licencing arrangements and how they will be administered. Currently Brenda Edmonds is working on this issue. The paper is available on the ACA web page and Brenda and I would welcome others thoughts on the way in which we might respond. If anyone has the time to assist Brenda in the preparation of the response then I am sure that she would welcome volunteers.

Longer Term Plans

Although not definitive I would like to indicate some of the areas that I believe I need to focus on over the forthcoming months:

1. *Accountability.* Many people do not understand just what it is that the WIA offers them. In order to address this I will endeavour to increase the frequency and quality of way in which the WIA and its officers communicate with all amateurs. I propose to achieve this by means of regular articles in AR and the divisional broadcasts. It is important that everyone knows what the issues are that we are facing, along with broadcasting the successes achieved by the WIA for amateurs.
2. *The future of the hobby.* We need to increase the profile of amateur radio in all areas to encourage a wider involvement. We know that amateur radio as a hobby is in a decline in Australia. This is not the case in all countries. We need to review what is happening in the US and the UK to determine what we can do to make amateur radio relevant to the next generation of amateurs. Some of the initiatives might range from attempts to introduce a concessionary rate for students and pensioners through to reviewing the current licencing arrangements with the ACA in an effort to increase the overall membership of the amateur radio community Australia wide.
3. *Listening to the membership* to find out what their thoughts are. I propose to do this through being available to talk to you as often as I can. Where possible I will take the time to visit clubs, divisions, and events such a Wyong. In addition I always welcome comments by electronic mail and where essential by telephone. Whilst the current Divisional structure has its role in the current administration I do not see it as an impediment to the membership liaising directly with the Federal directors on matters of interest.
4. *Patronage.* Amateur radio does not exist in isolation. Many of us are members of commercial, academic, government or professional bodies. Many of our employers perceive our participation in amateur radio as something that serves to enhance our day to day work. I would like to try and make this currently informal relationship something that we can all benefit from. Only by making the profile of amateur radio more prominent can be hope to achieve the increase in numbers that we need to see our hobby thriving well into this century.

All of the above plans rely heavily on your input. This might range from the expression of any opinion on the way in which we can improve some aspect of amateur radio through to your active involvement in a project to bring such a plan to fruition. A number of federal positions remain open for anyone who would like to assist. One thing is clear and that is that the best hopes for amateur radio lie with the efforts of each of us working together for the benefit of our hobby.

Finally I would like to extend my most sincere thanks to the outgoing committee for all of the hard work that they have put in over the last year or so. Without their efforts none of us would be in a position to look forward to enjoying all of the aspects of the hobby over the next year.

Ernest Hocking VK1LK

The Simple Z Match Tuner Simplified

Lloyd Butler VK5BR

The requirement

You need some sort of simple-to-build and inexpensive gadget to match your HF transceiver to a wide range of antenna impedance load conditions. (In fact almost any old piece of wire you might care to hang up). You would also like it to match both unbalanced and balanced loads on all HF bands.

Ask somebody what to do and you will probably get the answer: The Z Match.

Considering all the data we have published on Z match tuners and the different circuit arrangements we have investigated, one could be forgiven for being confused about which Z Match design one should choose to satisfy the criteria of the opening paragraph. Based on all the experimental work I have carried out, here is what I select as a simple design, which has been fine-tuned to match a wide range of antenna impedance conditions:

The design

The circuit diagram is shown in figure 1. The circuit arrangement of L1, L2, C1 & C2 is identical to that which I described as the AR Single coil Z Match, Amateur Radio (AR) April and May 1993.

Coils L1 (57 mm diam.) and L2 (67 mm diam.) are wound with around 16SWG gauge enamel wire. The precise gauge is not critical but the heavier the gauge the better the efficiency one might expect from the tuner. The former (figure 2) is made from Perspex sheet and drilled as shown to support the individual turns of the coils. The inner holes support L1 and the outer holes L2. Initially wind coil L1 close spaced on a round former, which has a diameter less than 57mm, and with a few more turns than the 14 specified. Release the winding from the round former and allow the winding to expand to the right diameter. (Some experimentation may be required to get the initial diameter right in the first place). Thread the winding by rotation into the support holes in the Perspex former. Trim off the winding at 14 turns and clean off the enamel insulation for soldering connections at the ends. Also clean off enamel for soldering tap points at 7 and 10 turns.

The same treatment is repeated for L2 by first winding on a round former (in this case something less than a diameter of 67 mm) and then threading the coil into the outer holes.

Variable capacitors C1 and C2 are tuning gang types with around 0.25 mm plate spacing and recovered from old radio receivers. Whilst these capacitors might be difficult to purchase off the shelf, they are often picked up at amateur radio trading marts. The plate spacing is fine for the usual transceiver RF power of 100 watts. It is a bit marginal for higher powers and under some matching conditions, arcing across the plates might be experienced at the amateur power limit of 400 watts.

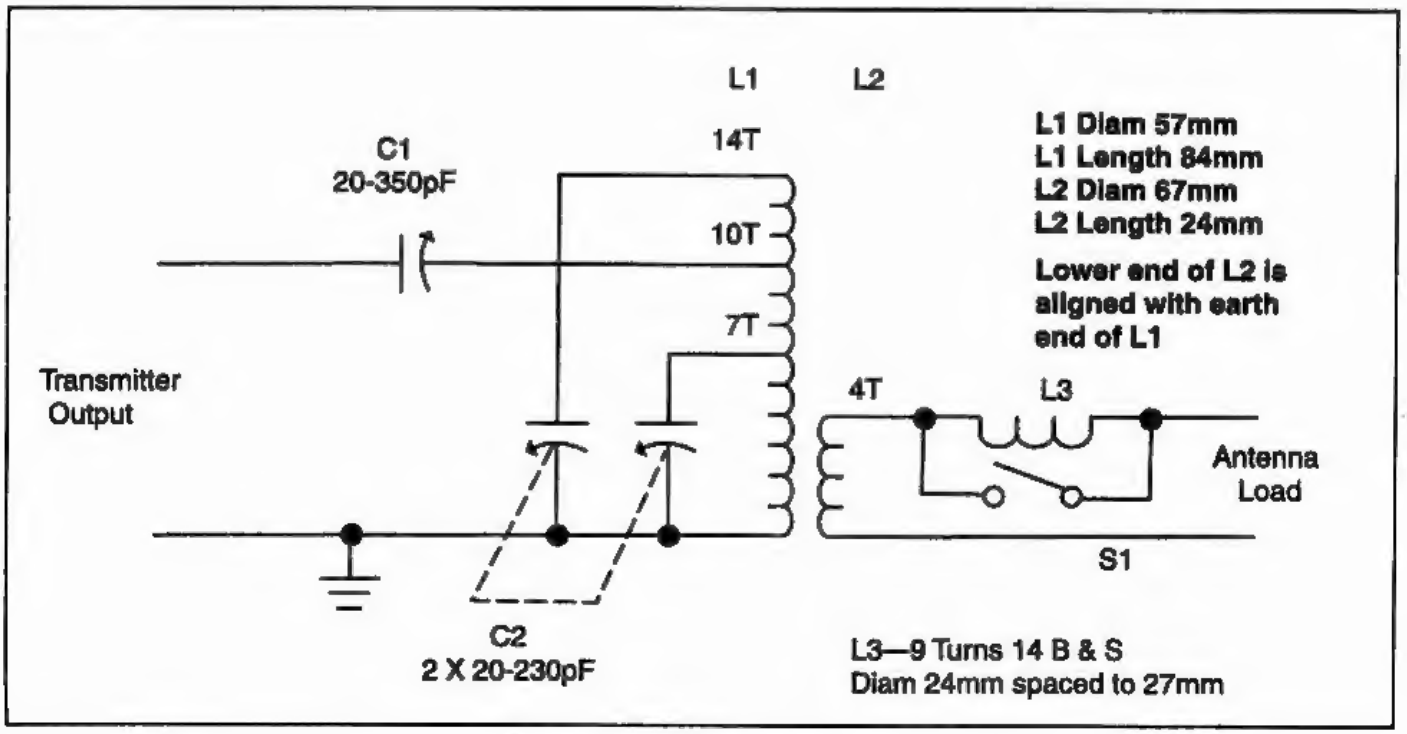

Figure 1. Single Coil Z Match Tuner

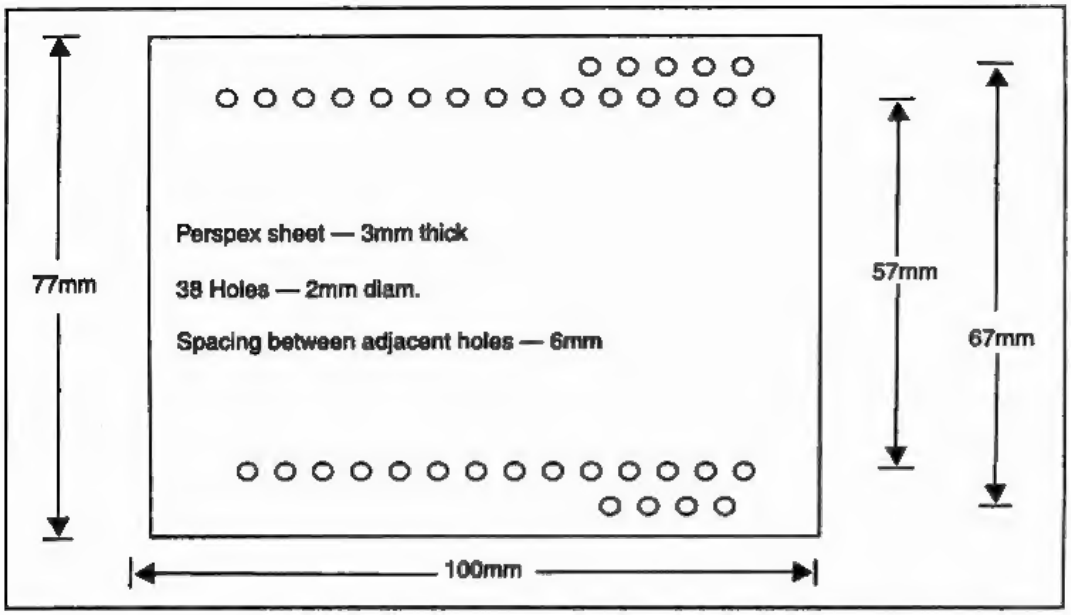

Figure 2. Perspex support sheet for coil L1-L2

The coil assembly can be mounted using a small L bracket fitted to the Perspex sheet at the cold or earthy end of L1. Heavy connecting bus bars between L1 and the tuning capacitors can provide support to the upper section of the coil assembly.

If you refer to the original Single Coil Z Match articles, you will see that L3 and S1 are not inclusive and they are a further addition. In fact for most matching conditions, they will not be needed and L3 will be switched out by S1. However a characteristic of the Z Match Tuner is that to match low resistance loads, some reactance is required in the load circuit, either due to reactance reflected from the antenna load, or the reactance of L2, or a combination of both. The antenna load impedance might be capacitive reflecting a capacitive reactance back to L1. If by chance this happens to be close in value to the inductive reactance reflected to L1 due to the inductance of L2, then the two reactances cancel or near cancel. For this condition, a match is unlikely to be achieved for an antenna resistance component somewhat lower than around 80 ohms. The theory of this phenomena was explained in more detail in our article Amateur Radio, March 1997 (Butler & Thornton).

To get over the problem when this occurs, some extra reactance is simply switched in by the addition of L3. In practice, if a match cannot be found by adjustment of C1 and C2, then switch in L3 and try again.

The inductance of L3 is not critical. As specified in figure 1, it has an inductance of close to 1.2 uH. Air wound with a heavy gauge wire, it can be made self-supporting by soldering its ends to insulated mounting tags. Apart from its use in the particular single coil tuner described, the inclusion of the circuit L3S1 is a very useful addition to any Z match tuner design to cope with the sort of condition I have discussed.

Except for some sort of front panel oblique base assembly or container box, left to one's own imagination, the only other major components are two vernier dial drives fitted to the two tuning gangs. The capacitor settings for a match in a Z Match Tuner are usually quite critical and the vernier drives are quite essential to carefully locate these settings and hold the capacitors locked. I find it's best to tune with both hands, one on each dial, as it is sometimes necessary to chase one dial setting after the other, leading into the optimum settings.

In conclusion

Follow the design as described (particularly the precise specification for L1L2 coil assembly) and you will have a unit to a design which has been "fine tuned" so that it will match most of the impedance loads you might encounter.

It can be used on all the amateur bands of 3.5 to 28 MHz with either a balanced or unbalanced load.

Power efficiency is very good for frequencies up to 14 MHz and for load resistances up to 200 ohms (This was discussed in AR Sept. 1995). Some loss in efficiency can be expected as load resistance is raised higher.

Output balance is quite good for frequencies up to 14 MHz and balanced load resistances up to 1000 ohms. (This was discussed in AR April 1996).

ar

(Originally published in the Adelaide Hills Amateur Radio Society Newsletter July/Aug. 1999 & republished in Lo-Key June 2000)

PSK31 The Easy Way

Part Two

This paper builds upon the basic concepts of PSK31 discussed in Part One of "PSK31 The Easy Way" (1) by looking at recent developments in software, and using PSK31 on air. DigiPan PSK31 software (4) has become a commonly used computer program in recent times, and has identified many of the limitations (2 & 3) of the original front end, display, macro's and general ease of use by the wider Amateur Radio (AR) community.

A broad summary of PSK31 operating techniques is discussed with hints and tips for the newcomer with using keyboard-to-keyboard communications for DX hunting and general on air chatting with friends. Some questions remain, Eg: "Will PSK31 make RTTY obsolete?"

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A year has passed since the publication of "*PSK31 – The easy Way*" (1). During this time, thousands of Amateur Radio (AR) operators worldwide have become active with this comparatively new data mode of communications, and more appear every day. Whilst debate about CW testing in the AR Licensing Requirements continues to appear in AR journals around the world, little discussion is offered about how PSK and other modes can supplement CW thereby furthering the interest and diversity of Amateur Radio for the benefit of all.

During a recent PSK contact with an overseas operator, the writer discovered that the DX station was deaf and had to give up AR operation because he could not hear CW and SSB stations. PSK came to the rescue, and now he can enjoy his beloved hobby once more. Other cases include "seniors" who find it difficult to use a Morse key because of limited hand agility but they find that a computer mouse "click" was easy to do, and whole sentences can be inserted into their PSK "overs" with little effort. There are many other examples where PSK31 has given AR operators the freedom to meet with other operators worldwide on equal terms.

The writer has been very active with PSK31 for almost two years, and has watched the vast uptake of the mode at first hand. Two years ago it was difficult to find anyone using the mode, yet today, a short CQ beaming Europe immediately causes a pile-up that can last for many hours and easily fills a full page in a logbook!

Bad operating habits plague PSK31 just the same as any other mode on the HF bands. Calling CQ right on top of your signal, when you are conducting a contact with a DX station might mean that you lose that illusive DX station - is all to common on today's crowded bands. However, good PSK operating practices should be upheld, and this paper highlights just a few of these to get you started.

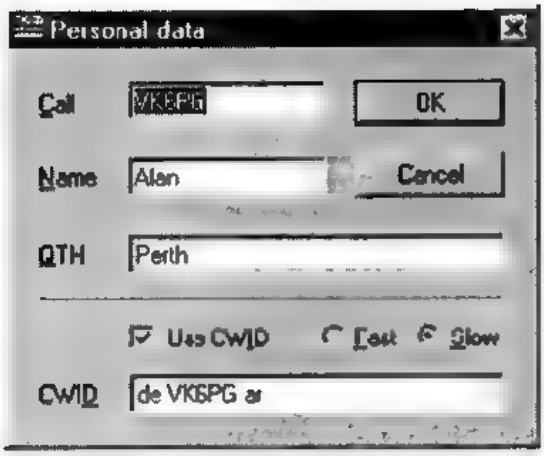
One of the first software packages written by Peter Martinez, G3PLX (2 & 3) and offered free to AR operators was **psk31sbw.exe**. However, many skilled AR programmers have now developed new "front ends" using the same Varicode core written by G3PLX to improve the general "useability" of PSK software. At the time of writing, DigiPan (4) seems to have become almost the defacto software standard on the HF bands, and this paper deals with obtaining, setting up, and running DigiPan on your home computer.

DigiPan Software

DigiPan is a "freeware" computer program that can be quickly downloaded from the Internet (4). The downloaded file is less than 600kb and will easily fit onto a 1.44Mb floppy disk as a back-up file, or to give to your friends to try. Named – **digipan6.exe**, for version six onwards, is a self-extracting file that can be installed in a Folder called (say) DigiPan in your Windows, Programs folder. Just copy the digipan6.exe file into your new folder and "click" the file to enter the installation and setup dialogue menus. On a Pentium 166 computer, the installation just takes a few seconds! Once the program has been installed on your computer, using My Computer, select the DigiPan folder and look for the file – DigiPan.exe. "Click" this file to open the DigiPan interface program.

If you have followed the instructions and build your own interface box (1), then you should have a computer serial port dedicated to PSK31 acting as a push-to-talk (PTT) line. This places your transceiver into the "transmit mode". Note the Com port number ready to configure DigiPan to your own requirements. Next, "click" on the Configure – then Personal data ... options to bring the personal dialogue box up onto your screen.

This is the easy bit! Fill in the boxes with your own call, your name, the QTH, and if you intend to use an automatic CW identification at the end of overs on



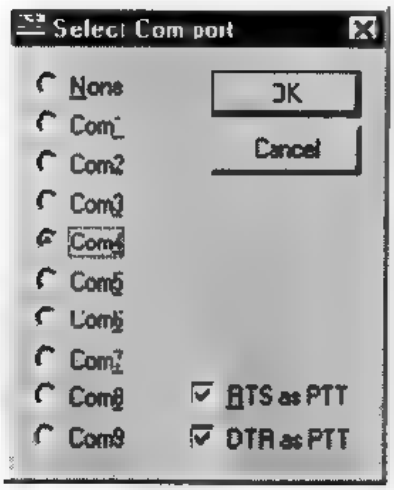
PSK31. "Click" OK and you're done.

If you are a Short Wave Listener (SWL) and do not intend to use DigiPan as a "transmitting" program. That's fine. Enter your SWL number for the callsign and ignore the CW ID bits. The program works exceptionally well as a receive only program, and ideal as a SWL DX monitoring and logging program.

Select the Configure operation again and select Serial port...

Select the Com port for your own computer. The writer is using Com Port 4 with RTS and DTR checked as well. Once done, "click" OK and it's done.

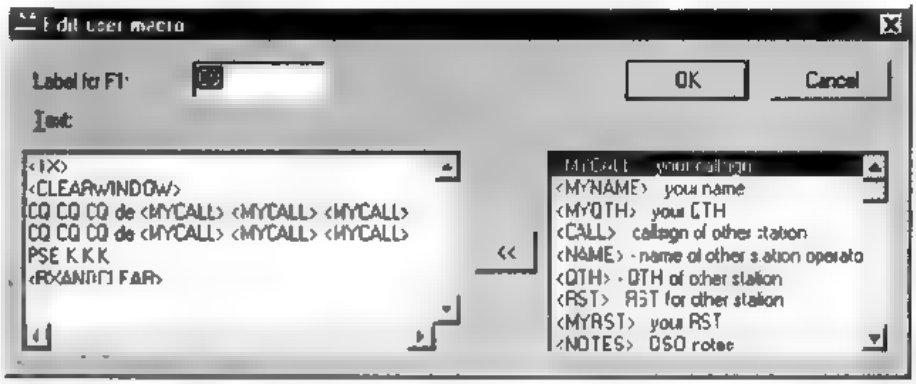
Readers might have computers with just two communications ports. Port 1 might have your mouse connected, and Port 2 may have an Internet modem or transceiver control software running automated logging etc. If so, you may need to buy a comport expansion card for your computer. These cards are available from most reputable computer stores for a small sum. Read the installation instructions carefully to avoid software conflicts, or ask a friend to help you with the installation of the card if you are new to computers.



DigiPan is now ready to run with your transceiver or receiver if you are a SWL.

Macro Editing and Linking

DigiPan has a wonderful macro feature. Macro's are short sentences or information used in regular on air sessions. Examples range from CQ, RIG, your NAME and QTH, QRA Locater number, Grid square, and many others which are personal to you own style of operation. At the top of the DigiPan toolbar, there are 12 buttons that represent the 12 function keys on your keyboard. To see each of these, select the first button and "right click" to see the macro editing window shown in to picture above. <TX> places the transceiver in the transmit mode. <CLEARWINDOW> clears old text from your lower transmit window. <MYCALL> inserts your own call from the Personal data entered previously, and <RXANDCLEAR> clears your transmit window ready for you to respond if called by another station. These macro commands can be selected from the right hand window and automatically inserted into your custom macro by "clicking" on the "<<" button. No programming experience is necessary!



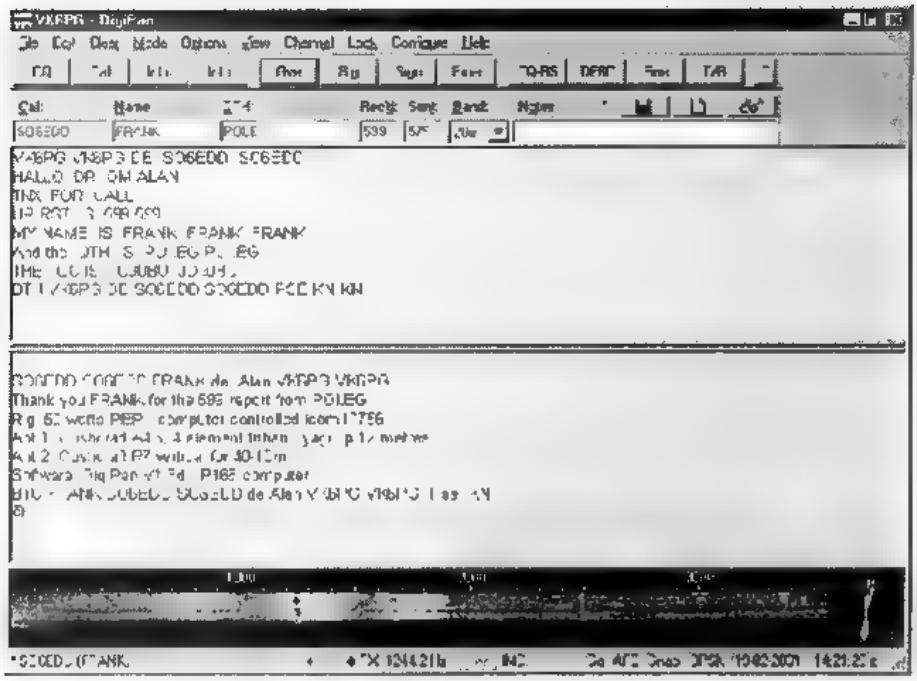
Before you launch into a frenzy of PSK operation, write down on some scrap paper some examples of macros that you will need. Then place them in order from F1 through F12 to complete your final collection. Examples of some macros can be seen from the writer's DigiPan installation shown below.

Common macros might be **CQ, CALL, INTRO, INFO, OVER, RIG, SIGN, EMAIL etc.** Of course the most important macro will be **T/R** which switches your transceiver to **transmit** or **receive** when needed. However, even this can be "automated" with the <RXANDCLEAR> command Because DigiPan has a fully integrated logbook that stores all your PSK contacts for you, you can end your **SIGN** macro with the <SAVEQSO> command! The combinations are extensive, feel free to write, edit and use your own complex macros.

On the right hand side of the 12 macro buttons, a small double ^ button allows the operator to select another 12 macro buttons. This gives you a total of 24 macro options. Again, do some advance planning especially when considering PSK contesting, rubber stamp contacts, rag chewing, QSL information, DX chasing, and personal details etc. In just a few days of operation and you will be back into editing and refining your macros – even when you are in the middle of a PSK contact!

Once you have written short macros such as the **CALL** macro and by first entering the callsign of the wanted station inside the CALL white box, then by "clicking" on the **CALL** button, the transceiver drops into the transmit mode, calls the station, adds the DE and your own callsign several times, finishes with PSE KN, drops back to receive and clears the window. Wow that's fast and I only had to "click" once. It gets even better. Try an **INTRO** macro that automatically introduces the customary exchange of callsigns Then a **FINE** macro which adds comments like: Hello <NAME> thank you for the report <MYRST> from <QTH> <NOTES>.

A full on air two-way contact can be



made **without doing any typing** at all once the macros are fine tuned. For example, when you have answered a station with **INTRO**, add the **FINE**, add the **INFO**, "click" **RIG**, **QSL** and **OVER**. Just SIX "clicks" and you have almost finished. While you are digesting the information from the distant station in the receive window – "click" the **INTRO**, **TNX**, **SIGN** macro buttons, and when the "over" is passed back to you, just "click" the T/R button and complete the contact. The screen is automatically cleared and the contact information is saved in the DigiPan logbook. Nothing could be easier. The writer regularly has pile-ups on 14MHz and can work 20-30 DX stations without typing **ONE WORD** on the screen except to enter the station Call, Name, QTH and reports into to white windows at the top of the DigiPan window.

On Air Contacts

The DigiPan waterfall window allows you to net onto a station by "clicking" on the yellow PSK31 signal seen on the screen and heard in your headphones. At weekends when the band is busy, the waterfall is full of yellow signals slowly wandering down your waterfall. Just "click" onto each one to read the mail, eavesdropping, or find out who is calling. Once the little diamond icon appears on top of the wanted signal, get ready with your **CALL** macro for a fast start before someone else grabs him! If he's who you are looking for, enter the call in the white window, hit the **INTRO** macro and wait until he's finished calling – then GO with the T/R button. If he answers, and while he's transmitting to you, start "clicking the macros in the desired order ending with the **OVER** macro. This process means that your characters are transmitted a full speed without the recipient seeing you pecking away at your keyboard with one finger. From then onwards, sit back and enjoy your contacts by just "clicking" the desired macro options. Linking macros as you go along is a pure delight and really is "*PSK31 – The Easy Way*".

Operating Practice

Like other AR modes of communication, PSK31 needs some personal discipline on your part. Do not be guided by some operators who insist on tuning up on air, call stations when they are already in contact, ignore the KN commands, and operate PSK31 without a proper exchange of call signs. Spend plenty of time listening (and watching) the traffic around 14.070MHz and get some experience in proper procedures and practices, and modify your own macros accordingly to streamline your own PSK31 station.

Some good macro examples might be:

<TX>
<CLEARWINDOW>
CQ CQ CQ de <MYCALL> <MYCALL> <MYCALL>
CQ CQ CQ de <MYCALL> <MYCALL> <MYCALL>
PSE K K K
<RXANDCLEAR>

Use no more than three CQ's followed by three <MYCALL> commands then an ENTER on your keyboard followed by one repeat line is more than sufficient for the average CQ call.

QSL is OK via the bureau. Goodbye from Western Australia - Zone 29.

73's <NAME> and thank you again for the PSK31 contact from <QTH>.
<CALL> <CALL> <NAME> de <MYNAME> <MYCALL> <MYCALL> AR SK
<RXANDCLEAR><SAVEQSO>

Be polite but keep your messages and macros short. Avoid "waffle" and especially casual Australian "jargon" which some DX stations do not understand. In some countries, the word MATE means to have sex! Do I need to say more?

DX Hunting and Chatting

DXCC is very easy these days on PSK31. With the beam pointing on Europe or the USA your country score will rapidly climb to new heights. WAC can be achieved almost any Saturday or Sunday when the DX bands are open. At the time of writing, VK and ZL stations are still fairly rare to many foreign stations and even the DX-peditions like D68C and planned Spratly Island adventures are now including PSK31 in their inventory these days.

Hunting DX is very easy. Try the DigiPan **Options**, the **Arrows for seek**, and/or **Continuous seek** by ensuring there is a tick (T) along side these options. Then use the keyboard left and right arrow keys to let DigiPan find the stations for you! Try "clicking" on the pair of glasses to find out more about the stations that you have stored in the DigiPan logbook. DigiPan even finds duplicate contacts for you, and if you have programmed your own macros correctly, DigiPan will automatically enter the operator's name, QTH and other data when you work the same station again.

At your leisure, run through all the DigiPan options and check that all is well, and that you now feel confident to let yourself loose on the DX.

Chatting to your "regulars" or locals can be fun. This is when you have to do some typing to send casual information, the weather, how the XYL's operation

went today, who you worked last night or the date and time of the next club meeting. Three or more AR operators can work in a round table with break-in operation, or indeed start your own local net. The options are almost unlimited – especially for young people who understand how to use a computer but will be amazed when they find that can actually chat to other operators without the added line and service provider costs associated with the Internet. Computers are not a threat to AR - they now enhance the hobby.

Summary

This paper discussed the basic attributes of DigiPan and PSK31. Installation, setup and macro programming has been outlined with examples of simple macros commonly used on air by AR operators. With the continuing debate on the future of CW, PSK31 is offered as a welcome relief to operators looking for an easy way to enhance the hobby, and give personal fulfilment by joining in the fun of using data as an affordable communications medium.

Readers are referred to "*PSK31 – The Easy Way*" (1) for computer requirements, background details and constructional information. Copies of both Parts 1 & 2 may be obtained from the writer (pre-paid postage please), or downloaded from the Internet at: http://www2.tpg.com.au/users/vk6pg/vk6sig

To assist Australian and New Zealand operators, the latest issue of DigiPan is also mirrored at the above Web Site. Readers in difficulty can always discuss their concerns with the writer on packet or email at the addresses shown.

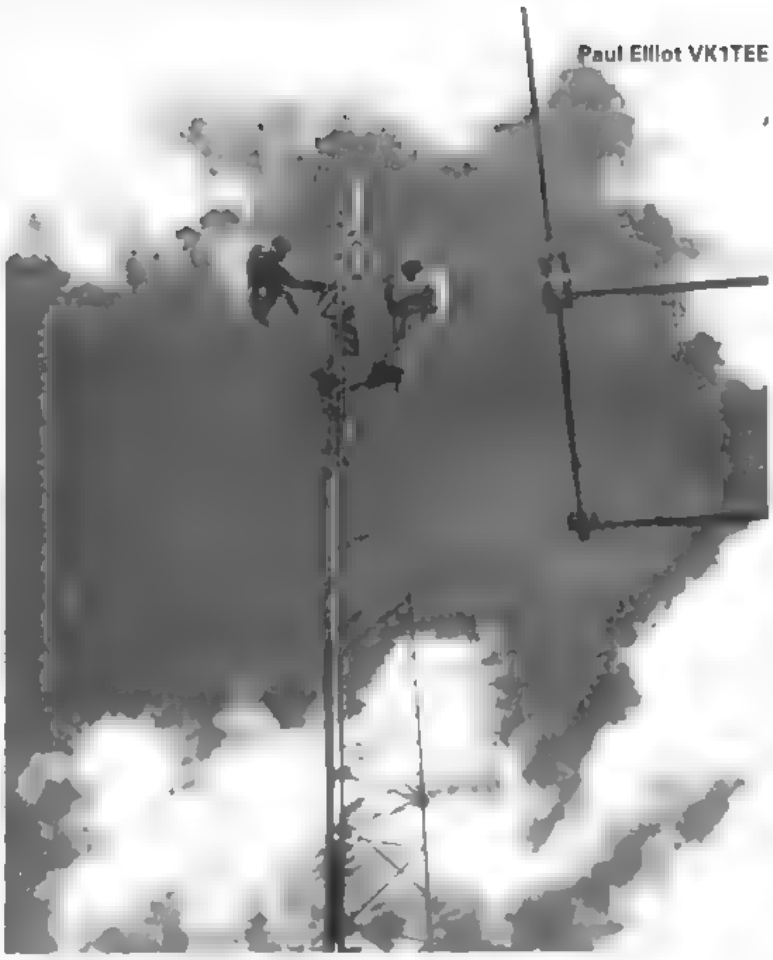
Happy Hunting.

References

1. Gibbs, A (VK6PG). *PSK31 – The Easy Way*. Amateur Radio Magazine. Vol 68/3. March 2000. pp 36-40
2. Martinez, P. (G3PLX). *PSK31: A new radio Teletype mode*. Part1 RADCOM 12/98. p14
3. Martinez. P. (G3PLX). *PSK31: A new radio Teletype mode*. Part 2. RADCOM 1/99. p 26
4. DigiPan Software mirrored at: http://www2.tpg.com.au/users/vk6pg/vk6sig

VK1RGI Refurbishment

Paul Elliot VK1TEE



This story tells how a major antenna structure rebuild was carried out at the WIA repeater site at Mt Ginini, in the south of the ACT. The project has already spanned two years, has been carried out entirely by volunteer labour, and was achieved without interruption to normal repeater service. About twenty local amateurs have volunteered at various times, with some making major personal contributions to the success of the project.

The Mt Ginini Site

Mt. Ginini is an elevated peak in the Brindabella Range about 50 km SW of Canberra. At a height of 1800 m, it spends most of the winter and some of spring covered in snow. The site is accessible from greater Canberra only after a 90 minute drive along the rough and at times narrow Brindabella Road. It is located in the Namadgi National Park, adjacent to the ACT/NSW state border. There is virtually no topsoil, and only the hardiest of mountain plants manage to survive there. The Canberra division of the WIA has had a repeater in this rugged environment for many years, and it has excellent coverage of much of the ACT and south eastern NSW..

Project Outline

Prior to the commencement of this job, the various repeater antennae were dispersed across two structures, namely a Southern Cross 40 foot tower, and an 8 metre light pole. The installation looked untidy, and offered no room for the expansion of services. Further, severe winds and ice build ups led to the early demise of many arrays due to the use of antennae supported only at the base.

By happenstance, the Division was able to procure a three section, strong but light all welded triangular tower. Being made of solid steel sections, the tower is ideally suited to the alpine environment. The new tower is more rigid than the current tower, and will require less maintenance as it will have fewer bolts and joints to come loose, which in turn could produce RF noise. After the erection of the new tower, most repeater services would be transferred to it..

Project Commencement

Work on the new tower began in early October 1998 when Paul (VK1TEE), Mike (VK1KCK), Neil (VK1KNP) and Paul (VK1BX) gathered at VK1BX's work place to refurbish the galvanised tower coating and to construct a template of the tower base. Rust was cleaned up by wire brushing and the whole tower was given a new coat of zinc rich paint. At the same time, the group made a template of the tower base from a piece of 19mm thick 5-ply clamped to the flanges on the bottom section of the tower. This template was later used in the construction of the foundation steelwork.

This steelwork was constructed from 20mm gal threaded rods. 2m lengths were placed through the holes in the template and held together at the top with plates . A triangular piece of expanded mesh was used for the base. Reinforcing rods connected the threaded rods in a crisscross manner. Laeli (VK2LO) welded the pieces together to form a cage like frame.

Foundation Works

Site work started at Mt. Ginini in late November 1998. Gil (VK1GH) and Paul (VK1TEE) observed while Martin dug a 2 metre deep hole with his back-hoe with much difficulty. Most of the spoil was large rocks, and the final hole was quite irregular. Gil and Paul completed the final shaping with pick, shovel, cold chisel and hammer.

Installing formwork in the hole was quite awkward. The original plan called for a circular column of concrete which would have a volume of about 2 cu m. Because making a circular form was just too difficult, it was eventually decided to use a triangular upper section for the foundation concrete work.

On an overcast Thursday, Gil and Paul made the journey to Ginini. Their plan was to have the form work in place by the end of that day, then to make final adjustments on Friday

ready for the concrete pour on Saturday. While Gil gathered up the loose rock and soil from the hole, Paul assembled the first and second sections of form work. The foundation steelwork and the first section of form work was placed in the hole, temporarily secured in place and made level. The second section of formwork was then positioned but the two sections could not be joined together. During this stage of the proceedings the sky opened so the pair retreated to shelter and reviewed progress. They agreed that the form work had to be fully assembled while it was out of the hole and then lifted into place.

On Friday, Gil and Paul spent the day drilling, filing and bending pieces of metal to make brackets to hold the corners of the form work at the correct angle.

Saturday morning dawned bright and clear. Alex Saeck and his son Nick, Gil, and Paul made an early start while Laeli followed with a concrete vibrator. On arrival, they assembled the formwork on the ground and the corner pieces were a complete success.

Next, scaffolding tube was attached to the form work to stiffen it and to provide a means of suspending it during installation. Alex, Gil and Paul then manhandled the now heavy structure to the hole.. It did not initially sit square as there were a couple of places where the ground still needed to be removed, but this was soon fixed. A little more work and the form work was level and solidly held. Then the foundation steelwork was checked for level and height. Even now there were still a few places where more dirt and rock needed to be removed. Gil, Laeli and Alex took turns with hammer, chisel and bucket and eventually the foundation was sitting in the hole well clear of the bottom and with plenty of room for the concrete

The foundation steelwork was temporarily removed to allow sealing of the formwork against concrete leakage, and while this was going on Paul applied bitumen paint to the top of the steelwork to prevent the ingress of water. When the steel contracts in the cold, the flexible Bitumen expands to ensure there is no gap between the steel and the concrete This prevents corrosion of the steel, and damage to the concrete in the freezing winter. Once more the foundation steelwork was placed in the hole and made vertical. The original plan had been for the cage to sit on blocks which rested on the floor of the hole. This proved to be difficult so the final solution was that the cage was suspended from the form work.

The final task was to attach two 100 millimetre conduit bends to the form work. Paul and Alex screwed two blocks of wood to the form work to hold one end of each bend. The bends were then placed over the blocks and Laeli secured the bends to the foundation with wire.

All this done, the group sat down for a cuppa to await the arrival of Joe, (VK2JG) with a load of concrete. No sooner had the tea-bags drawn to a nice colour than the peace and quiet was disturbed by the sound of a heavily laden engine. All thoughts of tea were abandoned as Joe drew his concrete truck into the compound. After a quick inspection of the site, Joe backed the truck up to the hole. Alex soon had the vibrator purring nicely and Joe began to discharge the concrete into the hole. While Alex settled the concrete, Gil and Laeli assisted by shovelling the concrete into the corners. This operation proceeded very smoothly and soon the concrete was level with the top of the form work. After a final vibrate, Alex and Laeli began the task of finishing off the surface.

Soon after, the heavens opened and heavy rain began to fall, but Gil had thought to bring some plastic sheet, and this was quickly placed over the foundation The tools were cleaned and the group took shelter from the rain. The weary party gathered together their tools at about 4:30pm and headed for home. They had achieved a great deal.

Five days later, Gil, Ian (VK1BG) and Ursula, Ian's wife, made the journey to Ginini to remove the form work and back fill the hole around the perimeter of the new concrete foundation. When the panels were prised away from the concrete rocks of various sizes were placed carefully into the space between the new foundation and the surrounding ground. and then the gaps were filled with dirt. Space was left where the conduits were to run to the hut. Rob (VK1KRM), lent his heavy duty drill and Neil, Laeli, Ian, and Paul started the installation of two 100mm conduits between the tower base and the equipment shelter. Once the trench was dug, work started on penetrating the base of the wall of the hut. It was decided that the most practical method was to make the entrance through the first course of bricks above ground. as the hut foundations were too thick for ground level entry. This proved to be strenuous work. The group took turns at drilling and smashing and slowly the hole was made through the wall and then expanded to fit the two pipes. Paul and Laeli took on the job of making the conduits the right shape using a specialised cut and glue technique, after which they were installed However there was some unease about the long term reliability of this arrangement. Meanwhile, Dennis Gibson (VK1DG) was fabricating the top mount for the tower. This piece would carry the VHF side mount dipole.

Tower Erection

Winter in 1999 came to the Brindabella's in the June holiday week-end. A large fall of snow was followed by a few days of warmer, wetter weather. Information from the Park Ranger indicated that a trip to Mt. Ginini was possible a week later. Gil and Paul loaded the tower onto a truck which was fitted with a vehicle loading crane (VLC) ,and started the journey up the mountain. The road was wet but the going was firm and steady until shortly after passing Bull's Head when the party encountered the first snow. The covering was light and so they pressed on. However, they soon encountered the first of group of homeward bound sightseers. This was on a stretch of road which was just wide enough for the two vehicles to pass each other, so there was no problem. However the next vehicle was met on a narrow stretch of road with a slight up-hill incline. Once the truck stopped, it had to be dug out and a tarpaulin placed under the driving wheels to get enough grip. Wisely, the pair decided to abort the trip The trees and hills looked magnificent with their covering of snow but the pair were not in the mood to appreciate such beauty.

In late September, the snow had melted, the weather was fine, and the vehicle was again available. The road was in good condition so Paul and Ian were soon on the summit. As the VLC did not have the reach to lift the whole tower upright, the pair settled for erecting the first section of the tower only. This was lifted onto the foundation

and happily it dropped over the foundation bolts perfectly. After levelling and bolt tightening, they assembled a gin pole to be used for lifting the other sections of the tower aloft. At this stage, rain started so the pair packed up and made the trip down the mountain.

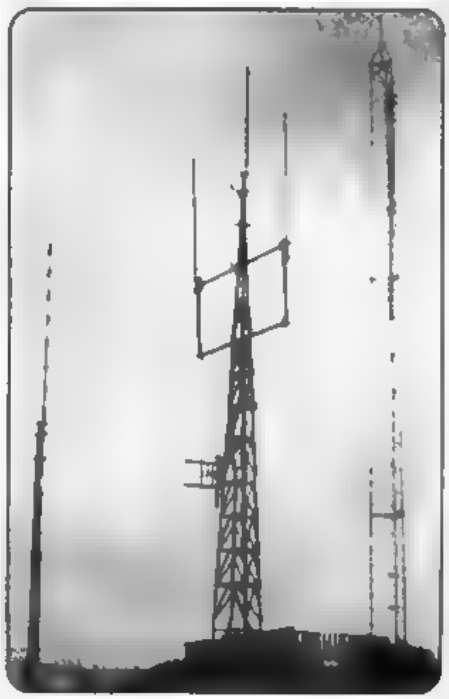
On a fine spring day a couple of weeks later, Gil, Ian, Neil, Phil(VK1ZPL), Colin(VK1HCC) and Ron (VK2TRL)gathered at Mt. Ginini for the next stage of the project. The gin pole was rigged with a Gant line and another was rigged from the top of the tower first section to the bottom of the gin pole. As the hauling party hauled the gin pole into position, Paul and Gil guided its passage and securely clamped it to the first section. A well earned break was taken and the group sat around and had a most enjoyable morning tea.

Next, slings were attached to the middle tower section and with Paul and Gil waiting at the top of the first section the lift began using the VLC to pull on the rope already fed over the gin pole,. However, there were a number of problems and the section had to be lowered and adjustments made to the rigging. The next lift was successful, and as the second section rose past them, the pair eased its passage past the first section. and slowly guided it into position. Podgers were used to temporarily lock the second section in place until all the bolts could be fitted and tightened. As it was now early afternoon, the party stopped for lunch. One more section to go!

The gin pole was now moved to the top of the newly installed section. The second lift of the pole was more complicated then the first, because temporary clamps had to be fitted and then removed as the pole passed. When finally the gin pole wa. firmly clamped in place the sun was low to the horizon, so the party decided they had achieved as much as was possible for that day and so packed up and headed home .

Three weeks later a large group set out for the mountain. Light, intermittent rain was falling as the group departed but by the time the summit h' been reached, the wind has risen an rain was more frequent. Another unpleasant surprise awaited the group. One end of the rope over the gin pole which had been so carefully stowed after the last trip was now wrapped around the lower section of the tower and the other knotted end was aloft, jammed in the gin pole pulley. The high wind made it unsafe to climb the tower and so an unpleasant few hours were spent on the conduits from the tower base into the hut. The party then departed for shelter at Bull's Head where lunch was eaten before a roaring fire.

During the week, Gil and Paul got their heads together and decided that if they could make a light pole with a hook on the end it was worth trying to gaff the rope. Paul had a ferret around and by using his pool sweeping pole and a number of sections of aluminium tubing



he soon had enough length to do the job. A piece of 9mm threaded rod was bent into a rough hook. The weather forecasts were now studied with a lot of attention. As it seemed that the week-end would be unsuitable, Gil, John and Paul decided to make the trip on the Thursday.

Thursday dawned bright, clear and calm. Paul started out early while John and Gil followed later. Once on site, Paul assembled his pole, attached the hook and went "fishing". Holding the pole vertical was a little tricky, but after a number of fruitless attempts, he managed to get the hook into the knot. Slowly he pulled the rope through the pulley until the end was once again under control. In the meantime, John and Gil were slowed in their trip up the hill as their vehicle got a flat tyre near the summit of the mountain

The trio had a quick morning tea and after attaching a rope to the tower section to guide the section past the lower part of the tower the lift began, this time using a 4WD vehicle winch to provide the pulling power. Soon the last section was suspended clear of the rest of the tower, with the flanges amply smeared with jointing paste. Paul and Gil then climbed to the top of the second section and attached their safety harnesses, ready to guide the last section into place, using podgers in the mounting holes to assist the line up. As John gently lowered the section, they guided it into place then secured it with bolts. After the nuts were tightened, Paul climbed to release the rope and Gil descended to assist John with rigging the head frame for hoisting. As the top of the gin pole was just above the top of the tower, there was not room to hoist the head frame clear, so Gil and Paul had to manoeuvre it into place in stages after it had been hauled up. First, they managed to get the whole piece onto the top of the tower in a horizontal position then tip it vertical and slide it around until the bolt holes were aligned. All the mounting holes in the Head Frame which Dennis had fabricated matched the holes in the tower exactly. This was vital, as this stage of the work was performed by two men suspended from the top of tower some 20 metres up.

The rope was then detached and the tower cleared of rope, pulleys and slings. By the time the climbing party reached the ground, John had cleared up most of the gear. Paul and Gil assisted with the last of the clearing up and the party departed.

Conduit Installation

Now the Tower was erected, discussions took place on the aerials and feeders. As the conduit placement had not gone as well as it could have, the decision was made to improve the job. Ron was of the opinion that a good job could be made by heating and bending the conduit One Saturday afternoon, Ron, Ian and Paul met at Gil's QTH. The conduits were filled with sand and then Ron and Ian began the task of heating the tube. Slowly the tubes were bent into the desired shapes. One conduit bent well, but the other ended up with some ripple in the surface. Gil then purchased some

fractional sewerage fittings. These come in various angles and it was thought a good job could be made with them.

On a fine day, Ian, Gil and Paul again made the trip to the mountain. The two conduits which had been buried in the ground were dug up and removed. One was replaced with the smoothly bent conduit from Gil's place, but the second piece did not fit either position well and as it had ripples on the inside bore was not used. Various pieces of sewerage pipe were fitted together to make the second run of pipe from the foundation to the building. Once all the pieces were cut to the correct length they were glued together. With the two conduit in place the conduit entry was sealed with cement and the conduits were finally buried.

Plumbing The Tower

Early in year 2000, a small party made the trip to Ginini to ensure that the tower was true. Nick(VK1NK) set up two theodolites so he had a good view of two of the tower legs. Initial levelling had made the tower reasonably vertical but small adjustments were necessary to make it perfect. The bolts were then tightened to their final tension and the tower was again measured. No movement had taken place during this procedure so grouting was then placed between the bottom flange of the tower and the concrete base. The hold-down bolts were also given a coat of gal paint to protect them from rust and to make it harder for vandals to remove.

Antenna Installation

Shortly before Christmas of 1999, Paul (VK1BX), Gil and Paul (VK1TEE) made the trip to Ginini late one afternoon. On arrival, the cable hangers were removed and that night was spent removing the old screw together clips and replacing them with spring-loaded devices. The party arose the next morning to find that the wind was howling and light rain was falling. They set about constructing a frame for the 2m antennae. By mid-morning the frame was ready but the wind was as bad as ever and light rain continued to fall. Paul and Gil made a start on fitting the new cable hangers but after about ten minutes on the tower exposure became too great and that part of the job was abandoned. The rest of the morning was spent clearing up and measuring up for future jobs. The party departed early after-noon and work ceased on this part of the project until the New Year.

Towards the end of February, 2000, Gil and the two Pauls made the trip to the mountain to run the feeders and attach the antennae. The torsion clamp which had held the gin pole in place was hoisted to the top of the tower and attached to the stand-pipe. The twin VHF Dipole array was then hoisted and attached to the mount. Another mount had been fabricated from dural to carry the VHF receive antennae. This was then hoisted into position and the two VHF Collinear antennae were hauled aloft and secured to it.

After lunch, the cable hangers were placed on the top section of the tower and adjustments were made to the spacing of the hangers on the other sections of the tower. The crew set about the task of running the LDF5-50 RF feeder inside the tower. The feeders were numbered and a block and tackle used to haul them aloft. The cables were attached to the hauling rope some distance from the top end, with the leading part of the cable temporarily taped to the hauling rope. As the end of the rope arrived at the top, Paul removed the tape and the cable end was allowed to flop around. When the bottom end of the cable arrived at the conduits, the cable was lowered and fed back into the hut using a rope attached to the bottom end to guide it into the hut. It was then secured by clipping it into the cable hangers on the tower. The process was repeated until all the cables had been run.

The next day, the feeders for the VHF service were terminated and poked through the existing trap door.. The SWR for all antennae was well within expectation. The base stations were connected up and a few test calls were made. After the joints in the feeders were made watertight, the party departed. At this stage Laeli noticed that the screws holding the feeder clips to the brackets were rubbing on the jackets of the feeders. In time they would wear through and could cause problems.

A couple of weeks later, Gil and Paul made another trip to the mountain. As there had been a major refurbishment of the VHF filtering since the original plans had been made, a decision was taken to bring all the feeders through a new trap door close to the filter rack. Gil had fabricated a new trap door and the pair soon had the new trap door sitting in its new home. Next the holes were made for the feeders. This was easy but lining the feeders up and keeping them in place took some effort Again, after a hard days work, the party made its way down the mountain.

There were two important tasks which needed to be completed before winter 2000 moved into the mountains. The colinear arrays had to be braced and the screws on the hangers needed to be replaced. With Winter fast approaching, a small party again made the trip. The first snows had fallen as Paul, Laeli, Neil and Mike (VK1ENG) made their way to the top. On arriving they found that the tower was covered on the western side with a build up of ice. Laeli climbed the tower and as the rest of the party stood well clear, she cleared the tower of the ice. Now the tower was safe, Paul climbed up and the brace was raised and fixed into place.

While this was going on, Neil and Mike replaced the lower hanger screws, after which Paul and Laeli removed hangers from the top of the tower and lowered them to the ground for the screws to be changed. Working in this manner, the task was soon completed. The party made its way down the mountain through the snow and all work ceased for the winter.

Conclusion

The ACT Division of the WIA now has an asset in the Brindabella Mountains of which it is extremely proud. There are a few minor tasks to be carried out to bring this project to its conclusion. The job has taken longer than expected. This was caused by weather, other committments and unexpected difficulties. The weather was beyond anyones control and this being an amateur activity was fitted in when other committments allowed. The unexpected difficulties were overcome by the combined efforts of everyone concerned Everyones contribution was considered and a consensus decision was reached which was often a better solution than any one idea Apart from the job being a lot of hard work, it has been a good team building activity and the participants can look forward to using this facility for many years into the future

Beyond Our Shores

David Pilley VK2AYD
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Listening on the LF bands I know a few members receive magazines from Amateur Radio Societies overseas. How about sharing some of the news with us? Most of what you read in this column is obtained from the RSGB, ARRL, QNEWS and other Internet sources that we acknowledge.

Advertising on Packet in the U.K.

*Effective 1st April 2001, Amateurs in the U.K. may place advertisements on their Packet Radio network. There are a few restrictions such as only 5 items may be advertised and only one advertisement permitted every 28 days and this must be the personal effects of the Radio Amateur. No business such as offers etc., from potential buyers is permitted.

Permission was also granted that Amateur Radio can now officially be used for communication purposes on behalf of User Services (Such as Ambulance Service etc., which are defined in the government press release).

Dangerous Waters

*Wounded ham-sailor continues recovery: Sailboat skipper Bo Altheden, SM7XBH, shot and wounded after pirates attacked his vessel March 20 off Venezuela, continues his recovery in Trinidad. Following the incident, hams on the Maritime Mobile Service Net assisted Altheden and his wife, ViVi-Maj Miren, after Miren put out a call for help on 20 metres. Miren reports that Altheden had to be hospitalized for additional surgery after he developed an infection. The couple plans to fly to Copenhagen later this month. The couple and their 44-foot ketch Lorna were en route to Trinidad and Tobago when pirates—later described by Miren as six men in a fishing boat—pulled along side. Miren said the Lorna will be hauled out and stored in Trinidad for the next six months. "I hope Bo will recover during these months so we can come back and start sailing again," she told Eric Mackie, 9Z4CP, who was among the amateurs assisting in the rescue operation. —Eric Mackie, 9Z4CP

Finland

A little research on the Internet (and reading Qnews) revealed some interesting facts The Finnish Amateur Radio League (SRAL) currently has 5000 members. This number represents more than 95 percent of all Finnish amateur licensees! The League obviously employs some highly advanced initiatives, SRAL is quite possibly the only national Amateur Radio society that recruits new members through television commercials. The organisation is professionally run and the Finnish Ministry of Education supports its efforts. (OH1EH ari.korhonen@kolumbus.fi)

WRTC-2002 will be held in Helsinki in July 2002. (Do we have an Australian team ready to compete in this great HF event? – you've got to be in it to win it!). As the time draws near there will be a lot of interesting news relating to this event being published.

An e-mail from the Finland Navy Amateur Radio Society put a smile on my face and it may put a smile on yours! The OH (Finland) Naval Amateur Society is named "Finnish Navy Radio Society". It was founded ca. 1995 to be an international branch of Finnish Club "Laivaston Radioamatoorit", Navy's Radio Amateurs in English. FNARS has now about 42 members, of which 6 are Silent Keys, and 6 are clubs. FNARS regularly meets every Tuesday, beginning 5 o'clock PM and the club has a fine station and biiig masts, for HF and V/UHF. It is free to join the member, only 'phone or mail to Rauno, OH1WR (oh1wr@sral.fi). (On HF we have no skeds or net). FNARS has issued an award, named "Suomen Joutsen Award, Swan of Finland Award" according to an iron sailship, now a museum in Turku... For award you have to gather QSLs from the 8 lands which Swan of Finland has travelled to, in her good days, viz. EA8 (Canary Is.), KP4 (Puerto Rico), LU (Argentina), OY (Faeroe Is.), K (USA), YV (Venezuela), ZS (South Africa) and 4X (Israel). The award fee is US $ 10 or 8.4 Euros... The manager is OH1AJ Award Manager, P.O.Box 266, FIN- 20101 TURKU, Finland, Europe.

Well – did it put small smile on your face with their membership?

Internet Linking G – ZL

Ian Abel, G3ZHI, gave a talk to the Christchurch amateur radio club – without flying the 19,000 km to ZL. Ian gave his presentation about the IRLP (Internet Repeater Linking Project) system to the Christchurch club using iPhone, talking on his local 2 m repeater. After the talk he took questions from club members. Using this system, any club using iPhone could have a guest speaker from anywhere in the world, 'live'. Ian only used audio, but it is possible to also use video. *(I use Netmeeting to talk to my grandchildren; perhaps this would work for a remote lecture..deAYD).*

The first UK IRLP node is now up and running. G4CUL now has a node on the IRLP system and has been linking to a 70cm and 2m repeater.

WRC-2003 and the 40m band

The following was on the ARRL broadcast in May and I've reproduced it in full so that you can see what is happening in the U.S. of A. Some of the comments on digital commercial radio are interesting. Basically they are plugging for 300 kHz in the 40 metre band and Region 1 (Europe) are currently restricted to 100 kHz.

*The FCC's World Radiocommunication Conference 2003 Advisory Committee has approved several "preliminary views"—or PVs—on expected WRC-03 agenda items. Among these is a US preliminary view supporting a realigned 40-metre amateur allocation at 6900-7200 kHz on a worldwide primary basis. The FCC is

soliciting public comment on all preliminary views by May 9

The preliminary view was developed by Informal Working Group 6, which is dealing with most issues of concern to amateurs. ARRL Technical Relations Specialist Walt Ireland, WB7CSL, serves as vice chairman of IWG-6 The PV says that, alternatively, the US could support a 7000-7300 kHz worldwide primary amateur allocation.

Amateurs in Region 2, which includes North and South America, have access to 7000-7300 kHz; the rest of the world has only 7000-7100 kHz, with the upper 200 kHz allocated for broadcasting. ARRL Technical Relations Manager Paul Rinaldo, W4RI, says the ARRL would prefer going back to the pre-World War II worldwide 7000-7300 kHz scheme. Some broadcasters, on the other hand, would like amateurs worldwide at 6800-7100 kHz, he said, so they would not have to move. A Radio Conference Subcommittee backgrounder from the Interdepartment Radio Advisory Committee—which reflects views of the federal government—said the issue "is liable to be very controversial."

Further complicating matters, Rinaldo said, is the fact that international HF broadcasters want to fold the 7 MHz realignment question into another WRC-03 agenda item examining the adequacy of HF broadcasting allocations from approximately 4 MHz to 10 MHz. Broadcasters are expected to seek additional HF elbow room to accommodate digital transmissions to complement their existing AM channels.

Any realignment scheme will involve having to move existing occupants—broadcasters on one side or fixed and mobile services, mostly government and Part 90 users, on the other.

"We want 300 kHz," Rinaldo said—reflecting the position of the International Amateur Radio Union, "but, we have some flexibility as to where it is."

Another PV with implications for amateurs would oppose the use of 420-470 MHz for use by the Earth Exploration-Satellite Service for so-called synthetic aperture radars, or SARs unless it can be shown that the satellites "do not cause harmful interference to amateur systems and stations " SARs are used to map regions on Earth's surface and are expected to be deployed primarily over tropical rain forest areas

Rinaldo emphasized that the preliminary views do not represent formal US positions and are subject to change as preparations for WRC-03 move forward.

Comments on WAC preliminary views may be filed via e-mail to wrc03@fcc.gov. The FCC's WRC-03 Web site, http://www.fcc.gov/wrc-03, includes additional information as well as links to related documents

WRC-03 is scheduled to begin June 9, 2003, and continue until July 4, 2003

The conference is expected to take place in Venezuela.

Education Notes

Brenda M Edmunds VK3KT
PO Box 445 Blackburn Vic 3130

Update review of WIA Exams Service

Readers will have seen elsewhere that there are modifications planned for the WIA Exam Service This service has now been running for nearly ten years, and a few changes have been incorporated into the system from time to time, but this seemed an appropriate time for a review of the whole system.

The WIA is concerned that, as the numbers of examinations have dropped, the number of examiners has, if anything increased slightly. Some examiners registered a few years ago have held only one or two examinations. Others have let their interest in examinations lapse, but have not notified the WIA Exam Service of this, so remain on the list of names that can be given to persons enquiring about entry to the hobby. It is time to tidy that list and ensure that all on it are prepared to be there as persons to assist new recruits

It is proposed that all currently on the list will be canvassed to determine their desire to re-register However, to take some of the load off the Federal Office, registration will be through the Divisions. A full update of the examiner's manuals and procedures is also under way.

ACA Discussion Paper

A more recent development has been the receipt from the ACA of the long-awaited Discussion Paper on further devolvement of the amateur examinations. This paper raises a number of questions about the future of amateur examinations that must be carefully considered by the WIA before a submission is prepared. Unfortunately, the time line for response (closing date 22nd June!) is very short, so there will not be much scope for input from WIA members.

However, if you can find the paper on the Internet and have time to prepare any sort of response, the WIA Federal Office will be very pleased to receive your comments and pass them to the Education Committee who are co-ordinating the preparation of the responding submission. We are expecting to receive input from Divisions and possibly some clubs

We will keep you informed of developments as they occur.

PS

To find the discussion paper on the Web, find the ACA Web page, then select either "What's new" or "Current issues" and scroll down to Discussion Paper.

AMSAT

Bill Magnusson VK3JT

Evolution of a Satellite Earth-Station

"Amateur radio shacks don't just happen, they evolve, and amateur radio is supposed to be FUN. Scrounging can be fun."

Chances are the first thing someone will say when they walk into a ham radio shack would be something like "Wow, I bet that cost a pretty penny". My standard reply goes along the lines, "Well, it took a long time to evolve into what you see today and, if you have a close look, a lot of it is quite old, second or third hand and generations behind the latest technology but it does the job". I may then point out that they have an "entertainment unit" in their family room which cost more than all the gear in my shack put together. Perhaps even their teenager has more money tied up in a hi-fi system in their room. That will usually bring them back down to earth and we can start discussing things rationally, beginning by my telling how this is a life-long hobby interest and then, "Here's what it can do."

Ham radio shacks are always evolving. My shack has undergone many changes over the years. Looking back to 1950, I came on the air with a station that was pretty standard for the day: a home made 19 valve receiver and 7 MHz transmitter that had five valves including the power supply. The transmitter was crystal controlled and just about state-of-the-art for amateurs in those days. I still have the crystal. It's marked 7104.6 Megacycles. None of the other gear still exists but looking around my shack as I type this I can see many items of equipment that are 20—25 years old and one Eddystone receiver, still my pride and joy, which is 50 years old. I think I've obtained very good value for money from those pieces of gear, even if some were quite expensive in their day.

So it is with the satellite station. To assemble all the gear to make a versatile station from scratch would take a lot of money, but you can sneak up on it. My approach has been to look for versatility as well as economy in every purchase. Pretty well everything in the shack is multi-functional. The only exception is the elevation rotator That is only used when working the satellites. But then it was purchased second hand, like most of the other gear, along with the azimuth rotator and of course it is used for the weather satellites too. I have one VSWR meter to make all measurements. It was purchased at a hamfest at least 20 years ago. My one and only computer came from a business that was upgrading. There were ten units altogether. They cost the princely sum of $100 for the lot. Its Pentium processor runs at the break-neck speed of 75 MHz and it has a mere 32 MB of RAM but with care it can be made to run everything from the ground station control and internet software to manipulating large image files from the 38k4 digital satellites. The transceivers are the so-called ICOM "twins", the IC-271 and IC-471 both purchased second hand more than 10 years ago. That duo was recently augmented to "triplets" with the addition of a second hand IC-1271. It will be used for uplinking to AO-40, for "aircraft-reflection" and 1.2 GHz DX work as well, perhaps even some modest EME work, "one of these days". Careful choice of a TNC will allow for the inevitable speed increases of modern amateur radio satellite work.

Home brewing still has a place. Good low noise receive pre-amplifiers are considered essential but before you start thinking about expensive commercial units, kits are available which are both good and inexpensive One of the big problems when working "mode-J" is the de-sensing of the receiver due to the 3rd harmonic of the uplink signal falling close to the receiver passband. This can play havoc when working full duplex, which is often a requirement. A difficult problem to fix by throwing money at it However, a viable solution to this problem is to construct a cavity filter either from printed circuit board or better still, copper tubing. The cost is small but the benefits are great. My 2.4GHz receive setup is equally modest. It consists of a discarded 1.6 metre satellite TV dish with a helix feed made from 1/8th inch copper refrigeration capillary tubing and a cut-down coffee can. Some research into design, a bit of panel-beating on the dish surface and an hour's work with pliers and soldering iron was enough to get a system going which will receive S-9 signals from AO-40 on 2.4 GHz and did not cost the Earth. Similarly, the RF can be handled with a modified MDS down-converter working into your two metre receiver.

I don't want to give the impression that you need to be a scrounger or engineer to get into satellites these days. There is no shortage of good, modern commercial gear around if you want to go down that path But if the initial cost is a bit off-putting there are alternatives and – after all this is AMATEUR radio Amateur radio shacks don't just happen, they evolve, and amateur radio is supposed to be FUN Scrounging can be fun It always has been. In the 50s in Melbourne it was Waltham Trading and "Ma" Dallie's, nowadays go along to any hamfest and you'll see what I mean Before you discount the possibility of

The AMSAT group in Australia.
The National Co-ordinator of AMSAT-VK is Graham Ratcliff VK5AGR. No formal application is necessary for membership and no membership fees apply Graham maintains an email mailing list for breaking news and such things as software releases Members use the AMSAT-Australia HF net as a forum.

AMSAT-Australia HF net
The net meets formally on the second Sunday evening of the month. In winter (end of March until the end of October) the net meets on 3.685 MHz at 1000UTC with early check-ins at 0945UTC. In summer (end of October until end of March) the net meets on 7.068 MHz at 0900UTC with early check-ins at 0845UTC. All communication regarding AMSAT-Australia matters can be addressed to:

AMSAT-VK,
GPO Box 2141, Adelaide, SA 5001
Graham's email address is:
vk5agr@amsat.org

working the satellites, do some reading, set down a plan of action and then have a good long look at what you already have in your shack. You may be surprised to find you are more than halfway there.

Sunspots and Satellite Signals

Signal degradation due to ionospheric anomalies is a regular occurrence each summer. The disturbances which create excellent conditions for terrestrial DX on the VHF/UHF bands and big scores in the Ross Hull contest can often have the opposite effects for satellite signals which by definition have to travel 'through' the ionosphere. One would expect the effect to be worse around the predicted peak of a sunspot cycle. That has proved to be the case this year but I didn't think the effects would last as long as they have. A distinct falling-off became noticeable around September last year and we are still feeling the effects in autumn, some 8 months later. The usual summer 'silly-season' would account for around 3 months of this but the effects just keep hanging around. I will be off the air during May and I hope the situation has returned to normal when I stoke things up again in June. Weak, fluttery signals with random polarisation changes are the order of the day. At worst the signals do not come up to normal levels until halfway through a pass. I noticed just today that an otherwise potentially good pass yielded only around 250kb download rather than the 2+Mb that one would normally expect from UO-36. The situation is made even worse by UO-36 having a tendency recently to not be available every pass. This has been more frequent on the nighttime passes when the satellite is in eclipse. It must be running close to the power budget limit.

The Internet and Amateur Radio Satellites.

Please indulge me while I have a little 'whinge'. Some things get under my skin. I could have used the title "The Internet v Amateur Radio Satellites" but that would have been provocative. There should be no "either/or" situation here rather one that looks at the advantages of using the Internet as an aid to satellite work. The thoughts behind this item were prompted by a question posted to the AMSAT bulletin board. It was from an amateur who was new to amateur radio satellites and roughly went, "Why is it that much of what happens on this bulletin board would, it seems to me, be better conducted on the digital satellites themselves?" Now, new to the satellite field or not, this chap raised a good question. It's one that had been in my mind also for some time. I've watched the amount of traffic on the digital birds decrease and at the same time seen the amount of traffic on the Internet bulletin board increase dramatically. The newcomer received the usual host of courteous replies. They included the following points in no particular order. Most replies agreed with the writer. The consensus was that indeed much of the BB traffic would be better on the digital birds because it's hard to argue against 'radio comms for radio amateurs'. But it seems that the digital birds are losing popularity because a lot of people are disappointed (let's say impatient) with the baud rates and the fact that the satellites aren't hovering over their QTH all the time. I don't know how these people would ever be satisfied. It points up one of the definite changes that I've noticed in listening around the traps. These days much of the excitement of experimentation seems to have vanished in favor of instant gratification and the Internet serves this desire very well. No amateur radio satellite can ever hope to compete with the Internet, even a 'geo' hovering above everyone's QTH. If you are waiting for that to happen then you are wasting your time. And why should it anyway? We have the Internet to do that. Amateur radio is about radio communication and experimentation Experimenting with new modes, faster modes, new techniques and the fascination of doing it by RADIO! I've seen the digital birds go from very low baud rates up through 1200 to 9600 and now 38k4 baud and this will be pushed even higher in the not too distant future. It's already much faster than my dial-up Internet connection ... but ... it's not "instant". Strange. The challenge is still out there. Where has the motivation gone? The 'heroes' of our great hobby keep designing and building these satellites and putting them in orbit for us. Yet again and again you hear people say "maybe when the baud rates are high enough to support the things we can do on the Internet, then I'll outlay the time and effort to get on the digital satellites". Don't hold your breath! I wonder how the satellite constructors react to this trend? Let's hope they don't give up and go back to stamp collecting! Perhaps the problem lies in the expense as mentioned in the earlier article. To keep up with the latest Internet practices is cheap and easy these days Most new computers come "internet ready". They are very capable and within most people's means Their GUIs can be mastered in a few easy lessons. The digital satellites and many of the analog birds however, take a bit more effort But that's one of the reasons people climb mountains. When the digital birds first came on the scene the Internet and home computing was in its infancy. People were willing to make that effort. Perhaps it's the 'instant gratification' thing. Maybe that has robbed a generation of their curiosity, their acceptance of a challenge. Traffic on the BB seems to point that way. "What's the URL for that?" is the commonest question from newcomers. Seldom "Where can I get a book on that subject and study it?" URLs don't grow on trees. "Some-one" has had to do the hard mile and research the subject. That was another reason why this particular question from this particular newcomer was like a breath of fresh air. Perhaps many are simply overwhelmed at the complexity of setting up a station for the digital satellites or the more difficult analog birds. But lots of folks do. Perhaps many feel the results do not warrant the effort required. But lots of folks do. Perhaps many have trouble locating the mountains of information needed to put a station together. But lots of folks do. All these points came out in the replies and they give us all something to think about. The trend shows no sign of slowing let alone reversing. Wouldn't it be a shame if we faced a future where amateurs will sit down in front of a computer terminal or worse, a "black-box" and download messages and data from a web-server with the country's only digital satellite ground station attached. Don't laugh. This is already happening in the case of telemetry from the new AO-40 satellite and the demand is there for more judging by the traffic on the BB. Is all this a worrying trend for you too? Perhaps I've just out-lived my use-by date. Keep smilin' .. See you on the satellites.

Bill...VK6JT
ar

ALARA

Christine Taylor VK5CTY
VK5CTY@VK5TTY or geencee@picknowl.com.au

Recent Hamfests

ALARA had a table at the Gosford Field Day again this year, hosted by Dot VK3DB, and Nancy Karas There was a lovely stream of visitors, too. Sheila VK4PAL, Val VK4VR and Ann VK4ANN were all down from the North, followed by Agnes VK2GWI and Nina VK2INZ. There were two other interstaters, Mary Moss from Ferntree Gully in Vic. and Lorraine Mencinsky from Sydney.

It is great to see regular visitors and especially people from other states. Whenever you are travelling make a point of discovering any Field days or Club meetings in the visited area, before you leave home or by contact with the local girls. Any excuse to further the friendship among amateurs!

Dot keeps a "Visitors' Book", a permanent record of who visited the table each year. It will be an interesting addition to our history collection.

Please remember that we want to know whenever anything of interest to women in radio and/or to ALARA members happens. Every now and then one of us is interviewed for radio or a local newspaper. Please, if this happens to you, send us a copy of the item or a tape of what you said. These are records that are so easily lost.

Tina VK5TMC QTHR the callbook is our historian. She will be delighted to collect any photos or bits and pieces for the history books we have on show at the ALARAMEETS.

A smaller Field Day, but just as enjoyable, was held in Ballarat. Mary VK3FMC and Judy VK3AGC were there, but I don't think there were any visitors from out of town. If I am wrong, please let me know and I will tell everyone about it next month

Don't Forget The Change In The Date

The ALARA Contest will be held at the end of August, shortly after the Remembrance Day Contest while your gear is still running hot!

It will also run for 30 hours, starting on the evening of Saturday 25th August (0600 UTC) when most of the activity will be on 80 metres, and continuing through the next day to finish at 1159 UTC on Sunday 26th.

We hope that having the extended hours will make it possible for more people to participate, and those that do join in will be able to have more time to chat The ALARA Contest is not about amassing an enormous score, but about having the chance to talk to your friends around Australia and in New Zealand.

OMs remember that the ALARA Contest is the best opportunity to work for an ALARA Award. You need ten contacts with ALARA members, from at least five states of VK or from ZL. They will all be there during the contest.

Do send in your logs, YL or OM or what about competing as a club? We have had some very good club scores in previous years. Logs may be sent in by mail or new this year, by email to Marilyn VK3DMS at gdsyme@hotmail.com

Dates For Next Year

Dear YL, dear friend,

As announced at the last year's wonderful and interesting and Meeting in Hamilton, New Zealand, we YLs from Palermo and Italy are pleased to tell you that we have started the planning of our project of the upcoming meeting.

Our homepage is still in 'baby-shoes' but we will update it often and hopefully being able to give you all the info you need to come and meet us in beautiful Palermo. Web site: http:l/www.qsl.net/y12002

The venue is going to be held at the sea-and beach resort of Palermo "Mondello", Hotel Splendid La Torre, which is located in the beautiful gulf of Mondello, just a 10 minute bus ride from the center of the town. We have booked rooms for 60-80 persons, a number that may be extended up to 100 persons. There are 2 other choices of Hotels, different categories, for your conveniences and pockets! All Hotels are close to each other.

In June, the climate is usually warm but not hot, temperatures 20°C during the day and pleasant in the evenings, hardly any rain, and much sunshine. We hope you will plan to visit the island before or after the Meeting with one of the tours. A local Travel Agency is preparing for the incoming friends.

We are looking forward to welcome many of you and share joyful days and pleasant evenings, tasting local food and let you feel our hearty hospitality. The organizing committee with the help of the local radio club will do their best to make the meeting an outstanding and unforgettable happening.

If you are interested in joining us for the Meeting, if you need more information, please write to the following address below, send a fax or e-mail.

33 de Maura IW9BO, Giovanna IT9ZJN , Vita IT9LAC, Alice IT9EOS, Ruth IT9ESZ

Fax: ++39'091'533330
Tel:++39'091'530659

And

First announcement for the ALARAMEET in October in 2002, from Friday 4th to Monday 7th. The venue booked is the Murray Bridge Community Centre and a program is at the planning stage.

As yet there is no web page but that is in the pipeline. If you would like more information so you can start planning your holiday trip next year to include Murray Bridge, please contact Jean VK5TSX rkopp@asiaonline.net.au

Watch this column for more information as it comes to hand.

Regular Luncheons

VK3 meet at the "Bella Vista Café" in Little Collins Street on the second Friday of each month.

VK5 meet at "Bertie's Pancake Kitchen" in the Southern Cross Arcade, King William Street, also on the second Friday of each month.

VK6 meet at the "Hyde Park Hotel" in North Perth last Thursday of the month

Visitors are ALWAYS welcome, whether we expect them or not If you are in town, please join us. If you have any family or visitors staying with you please bring them along, too. While it is nice to see the usual faces it is also nice to see some new ones.

Adelaide Hills Amateur Radio Society

The April meeting of AHARS had Arno VK5ZAR, best known in VK5 for his involvement in packet radio, to talk to us about the TV side of the Sydney Olympics.

Following the very interesting talk about the lighting for the Olympics this gave us a different perspective on a very large scale project.

Arno was a technician in the main distribution centre for the TV coverage of the Olympics, of which the TV distribution in Australia was a very small part. Fortunately much of the preparatory work had been done by Sydney based TV teams but there was plenty still to be done when Arno arrived four weeks before the Opening Ceremony.

The enormous quantity of cabling of all sizes that had to be connected in and out of the distribution centre was quite mind-boggling. There were boxes and boxes of connectors, racks, TVs, keyboards etc., that had to be made up into a fully working unit. Only experts would have even known where to start.

The chaos of cables and boxes became an orderly arrangement in an amazingly short time. It all went together and it all worked.

As it was for the lighting, there were backups for backups all the way. With an event like the Olympics there are no second chances. If a camera doesn't work the picture doesn't get to the right place. Every eventuality had to be anticipated.

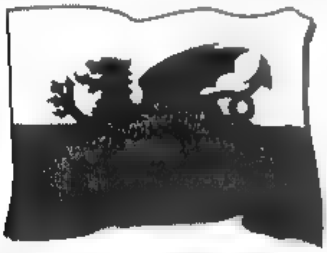
There were at least four cameras at every venue and for each camera there was at least one operator responsible for it at more than one interconnected control centre. As well there were more people responsible for the quality of the picture.

From the distribution centre the information from the sports venues was sent to something like 80 different "control centres" so that every country could access all the information about all 'their' athletes as well as all the other athletes.

Provision was also made for all competitors to be interviewed and for items of general interest or views of Sydney etc were available at all times.

Altogether a very interesting talk

Meetings of AHARS are held on the third Thursday of each month and the lecturers are always interesting, varying only in their technical content. Contact Geoff VK5TY or Alby VK5TAW if you are likely to be in Adelaide on the third Thursday. They will give you any more details you need to attend a meeting.



Help Dragons celebrate

Members of the Dragon Amateur Radio Club based in Anglesey have been making special efforts to contact Wahroonga, 20 km. north of Sydney.

To make their contact as authentic as possible the Welsh amateurs have, for each of the last 8 years, operated their station GB2VK from the historic transmitter site at Waunfawr near Caernarfon, North Wales, UK. It was from this transmitting station, originally built to span the north Atlantic, the first direct wireless signals were sent to Australia in 1918. The signals were received at an experimental receiving station run by Mr. E T Fisk of Amalgamated Wireless (Australia) at his home 'Lucania', Wahroonga. On the 22nd of September 1918, while in UK. the then Prime Minister of Australia W M Hughes, sent the first direct Wireless Telegram 'home' to Australia

In recent years it has become more difficult to make this contact, as there seems to be a shortage of interested amateurs willing to put on an amateur station at Wahroonga.

Dragon A R C members have contacted the magazine to seek any amateurs who would be interested, and willing to put on a special station annually to celebrate this historic event. The Welsh special event station uses the callsign GB2VK and runs for the 24hrs of the 18th of September each year.

Special QSL cards are sent for contacts, which tend to be around 14.055 and 14.270 MHz. plus or minus QRM, at times to suit propagation. (0500 to 0700 UTC.)

Mrs. Jo Harris VK2KAA, has done much to promote contact between Wales and New South Wales over the years. And D A R C members wish to express their gratitude for her considerable efforts.

The Dragon ARC has a web page.... http://www.gw3vvc.freeserve.co.uk, and can be reached via Email at- iss00f@bangor.ac.uk

Oxley Region Amateur Radio Club

The May meeting of the ORARC, held in Port Macquarie, was dedicated mostly to their up and coming Annual June Field Day, to be held over the Queens Birthday weekend. Apologies were given for the VK2RCN voice repeater that had been off air for most of April having some necessary repair work done. Travellers with 2 metre equipment migrating on the Pacific Highway and passing by Port Macquarie have an option of using VK2RPM on 146.7 mHz or VK2RCN on 147.0 mHz (both off-set low). Federal WIA Director, David A. Pilley, VK2AYD, gave an interesting talk on the structure of the the WIA and the direction it is taking into the 21st Century. The ORARC meet at the S.E.S Building in Port Macquarie on the 1st Saturday of each month at 1 pm. Visitors are always very welcome. They also hold regular club nets on Wednesday evening at 7pm on VK2RCN and on Sunday mornings at 8.30 am on VK2RPM. More information can be obtain from the Secretary Alan Nett, VK2GD, on e-mail anut@ozemail com au.de VK2GD

Novice Notes

Peter Parker VK3YE
12/8 Walnut Street, Carnegie, Victoria, 3163
E-mail: parkerp@alphalink.com.au
Novice Notes Online: http://www.alphalink.com.au/~parkerp/nonline.htm

Workshop and operating hints and tips

This month's column is a selection of hints and tips that I trust will be found useful around the shack and workshop.

Vertical dipoles from coax cable

With a Stanley knife make a cut around the coaxial feedline approximately one quarter wavelength from the end of the cable (length in metres = 71.5/ frequency). Then slit the cable to remove the outer jacket from the cut to the end of the cable. With a small screwdriver make a hole in the braid near the start of the outer jacket. With the screwdriver, lever the inner conductor out through the hole. Solder an eye terminal or washer to the end of the inner conductor to provide a support for hanging from a tree branch or curtain rail.

Uses for scrap circuit board material

These include small boxes, dividers where shielding is important, small nameplates (if etched) and square pads for 'paddyboard' construction. For the latter, tin snips or multipurpose shears will cut the material nicely.

Soldering two wires together without an iron

Wrap join with solder. Then wrap with aluminium foil. Hold a lighted match to joint until solder melts. Remove foil when solder sets.

Illuminated dummy load

A 12-volt 300mA light globe soldered into a PL259 plug makes a useful dummy load for HF QRP equipment running up to a few watts.

Cutting ferrite rods to size

Saw groove around rod with hacksaw. Hold rod in two hands and apply force. The rod should snap cleanly.

Determining loss of coil formers for antenna traps, etc

Place material in microwave oven with glass of water. High loss material will get very hot or melt. Material that stays cold or warms only slightly is suitable for use. Remember to remove all metal traces (e.g. wire or mounting screws) before doing the test!

Portable antenna mast

An eight or nine metre giant squid pole forms an excellent mast for portable operation. These lightweight poles (also called roach poles or telescopic poles) are available from fishing shops and collapse down to about 1.1 metres. Squid poles can support lightweight wire antennas for HF and VHF/UHF groundplanes. The poles will not support coaxial feedline unless it is supported by taping it to the pole.

Handheld antennas

Antennas that a quarter wavelength or less on handheld transceivers often benefit from the addition of a counterpoise. Clip a quarter wavelength of wire onto the earth connection of the radio's antenna socket.

Holding nuts in tight places

1. Blue-tac or small dab of glue on end of screwdriver
2. Rubber band across handles of long-nose pliers

Easy connectors

Terminal blocks cut up into strips make handy barrel connectors.

Insulators for wire antennas

For temporary portable antennas, use toothbrush handles. Otherwise use sections of plastic conduit.

Pedestrian mobile HF station

A case to hold a transceiver, gel battery and antenna can be made from pieces of 10mm-thick chipboard. Thread old coaxial cable through holes in the box to make carry handles. To prevent rubbing against the operator if the station is used whilst walking, glue carpet to the side of the box closest to the operator. For the transceiver, use a converted CB for 10 metres or Yaesu FT-817 for HF/ VHF/UHF coverage.

Spreaders for open wire feedlines

If you have a few more toothbrush handles, you can use them as spreaders in homemade open wire feedline. Alternatives include hair curlers, or my favourite, plastic irrigation tube about 6mm in diameter as sold by garden suppliers.

Doing well in contests

If you use a good antenna from a good location and consider yourself to be a 'strong station', spend most of your time calling CQ – others will find and work you. If your signal is weaker than others are, spend most time tuning the band and calling other stations. Once all stations heard have been worked, find a clear frequency and call CQ for a while.

Cheap VHF/UHF signal generator

An HF rig fed into a dummy load makes a crude signal generator for doing tests on VHF/UHF receivers or as a BFO for receiving SSB on an AM receiver. Set the transceiver to just above 28.8 MHz for harmonics in the 144 and 432 MHz bands.

Projecting sound forward from top-mounted speakers

Transceivers with top-mounted speakers can benefit from a yogurt container (with a forward facing cutout) placed over the speaker grille. The container projects the sound forward towards the operator

Improving access to station equipment

When you next renovate the shack, consider placing the operating desk about a metre from the wall. This will

make it easier to access power and antenna connections and add new equipment.

Labeling leads

Cables should be labeled to minimise the risk of equipment damage, for example when transmitted power is applied to the antenna socket of a receiver. A good way is to write (with a ballpoint pen) labels onto strips of paper 5mm wide and as long as the label requires. Clear adhesive tape is placed over the front of the label and around the cable. The tape is then continued so that it sticks to the back of the paper and around to the front of the label, where it is cut with scissors. The result is a descriptive 'flag' at the end of the cable near the connector. A refinement could be to write on both sides of the paper strip instead of one.

Solder dispenser

Pierce hole in 35 mm film container. Wrap solder around pipe or tube to form coil. Thread one end of solder through hole, and place coil inside container. Replace cap.

Antenna accessories at fishing shops

Apart from squid poles (see previously) several other items useful to the amateur can be procured at fishing shops. Fishing reels are ideal for storing wire antennas. Depending on the length and thickness of the antenna wire, diameters between 10 and 25 centimetres are suitable. Sinkers and fishing line are also useful for raising antenna wires over tree branches.

Uses for octal valve bases and film containers

Octal valve bases screwed to 35 mm film containers form useful plug-in coils for receivers, dip oscillators and antenna coupling units covering the low HF bands. Octal plugs and bases are still stocked by major parts outlets. For coverage of higher frequencies, use 5-pin DIN plugs and formers approximately 12mm in diameter, such as conduit.

Use for old coax

Lossy or water-damaged coax can still be used for ground radials. The braid can also be used for earth connections

Calling on repeaters

When putting out a call, press the PTT button, wait 5 seconds and then call. This gives time for people's scanning transceivers to stop on your frequency, for your call to be heard and increases the chance of getting a response.

On indicator

To add an on indicator for projects that operate from 12 volts, wire an LED in series with a 560 ohm resistor

Polarity protected projects

Simply wire the positive and negative power leads to the positive and negative connections of a diode bridge rectifier. The polarity applied to the two AC inputs is not critical. This technique is only recommended for low-powered projects with plastic or non-earthed metal cases and in situations where the voltage drop across the bridge will not impair operation.

Learning about Spread Spectrum

An excellent web page about spread spectrum communication can be found at http://sss-mag.com/ The site includes an amateur section.

BFO for SSB

Cheap one or two band shortwave receivers seldom have a beat frequency oscillator required for amateur SSB reception. A portable AM broadcast radio placed near the receiver can be used as a BFO, with no connections required. Setting the radio near 1.3 MHz should cause a carrier to be heard near 3.5 MHz or 7 MHz. To use, tune for maximum 'duck talk', and carefully adjust the broadcast receiver until the signal becomes intelligible. Move the receivers closer together for strong signals and further apart for weak signals. It's fiddly, but it works!

Estimating thickness of enameled wire

Wind 10 turns onto a pencil, measure in millimetres with a ruler and divide result by ten.

Tuning indicator for base loaded HF antennas

Attach one side of a neon bulb to the top of the loading coil. Leave the other side of the bulb floating. Use 5-10 watts and aim for maximum brightness.

Use for computer power supplies

Many articles have described how two disused computer power supplies can be made into a high-current 13.8 volt supply for transceivers, etc. Not all constructors have found this project straightforward, and only competent builders should attempt it. However if you are willing to accept a reduced voltage (11.5 to 12 volts) and reduced current (up to a few amps), the 12-volt output from a single, unmodified supply will adequately power CB and low power amateur equipment

Using small bits in large drill chucks

Wrap a few turns of solder around the bit, insert in chuck and tighten. The technique can also be used to salvage drill bits that have been broken

Preventing components being lost

When assembling kits or constructional projects, place the parts in a shallow dish to prevent them rolling off the table or bench

SO239 antenna mount

A square-type SO239 chassis mount socket makes a handy base for quarter wave ground plane antennas for two metres or seventy centimetres. The feedline can be fed up a tube (with an inside diameter larger than the PL259 diameter) or taped to a squid pole for a quick home station antenna.

Emergency supply of solder

Wrap solder around cord of soldering iron to form emergency supply of solder to use when your reel runs out.

Quick six metre antenna

It's worth a reminder that a 5/8 wavelength whip for two metres will operate effectively on six metres as a ¸ wavelength whip.

Cases from component stereo systems

1970s stereo equipment is now available cheaply from garage sales and car boot sales. The boxes from amplifiers, tape decks, graphic equalisers make fine enclosures for large projects, such as homebrew transceivers, antenna couplers and power supplies. Use printed circuit board scraps to cover holes if necessary

The WIA regrets to announce the recent passing of:-

K C (Ken) SEDDON VK3ACS
(JOHN) Kelly VK3AFD
A (Al) BOWLEY VK3AP
W A TRENWITH VK3ATW
C W RICHARDSON VK3QY

Technical Abstracts

Gil Sones VK1AU
30 Moore Street, Box Hill South, Vic 3128

The Parasol

A 160 metre top loaded vertical , The Parasol, was described in QST October 2000 by Al Christman K3LC. The antenna is a shortened vertical with top loading by three downward sloping wires which give it the name of The Parasol. The main vertical mast section is grounded at the base and the sloping wire top loading section is fed at the top of the vertical mast. A buried ground mat is used at the base of the antenna but this can be replaced with elevated radials without a great sacrifice in performance. While much of the article relied on computer modelling the antenna has been used with satisfactory results by commercial AM broadcast stations.

The antenna configuration is shown in Fig 1. The vertical section is a 70 foot tower. The tower base is bonded to the 120 quarter wave long buried radials. The coaxial feed is run up the inside of the tower and is bonded to the tower at the base, the mid point and at the top of the tower. The top of the tower is the feed point and the coax outer is bonded to the tower and the inner feed the three parasol wires which are joined together at the feed point. The parasol wires are each 46.533 feet long and slope downward at an angle of 30 degrees below the horizon. The circle at the apex of the tower is the feedpoint.

Matching can be by an L network at the base of the tower or you could use an impedance matching network at the feedpoint at the top of the tower. Feedpoint impedances of between 15 and 60 ohm are indicated by computer analysis.

The parasol whilst made up of three wires could be made up of more wires with the length adjusted for resonance. Two wires can be used but the pattern is not as circular. The downward slope can be varied but the length of the parasol wires will need to be adjusted for resonance. The support of the parasol wires should be non metallic rope. The tower guys can be non metallic but if necessary metal guy wires can be used if they are broken up into non resonant lengths.

The ground mat of 120 quarter wavelength radials can either be buried or run on the surface which gives the best computed result or elevated radials can be used. The elevated radials are in a gull wing form. They rise upward from ground level at the tower base at a 45 degree angle to a height of 12 feet and then run horizontally at this height. Eight elevated gull wing radials are used. This configuration of elevated gullwing radials is shown in Fig 2. The wingspan of the gullwing radials is 134.4 feet for 1830kHz. The parasol wires are 51.894 feet long. Another choice is to use inductively loaded radials.

The antenna characteristics obtained by computer simulation using EZNEC are given in Table 1. The characteristics of a full size vertical monopole are also given for reference.

While the computer simulations give a good indication of performance the final test is to buid the antenna. The values given by the simulation give a good starting point for the adjustments needed for the realisation of the satisfactory performance of the real world antenna.

EZNEC antenna software is available from Roy Lewallen W7EL PO Box 6658 Beaverton OR 97007. Email w7el@teleport.com. The price is $US89 plus $US3 post and Visa and Mastercard is accepted.

Table 1 Parasol and Quarter Wave Vertical performance compared using EZNEC at 1830 kHz. Unless noted the parasol wires slope downward from the tower Apex (feedpoint) at 30 degrees below the horizon.

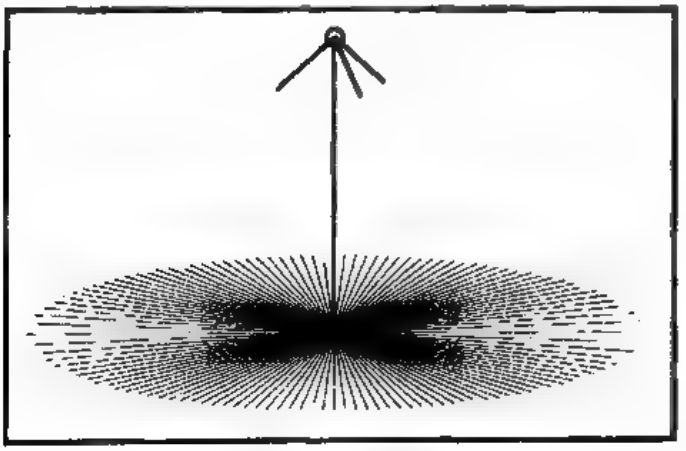


Fig 1. Parasol Antenna with 120 buried quarter wave radials. Circle indicates feed point.

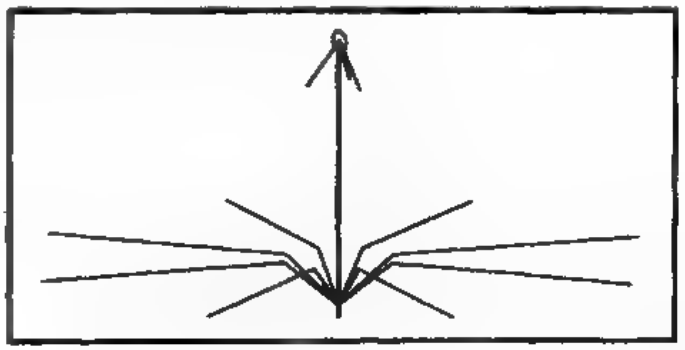


Fig 2. Parasol Antenna with eight gull wing bent radials each a quarter wave long above ground level. Circle indicates feed point.

Power Gain	dBi	Take-Off Angle	Feedpoint Impedance degrees ohm
Ground Mounted Quarter Wave base fed with 120 quarter wave radials.	1.28dBi	23 degrees	40.83 + j22 89 ohm
Ground Mounted Quarter Wave base fed with 120 buried 70 foot radials.	0.79dBi	22 degrees	45.05 + j20.35 ohm
Elevated (H= 30ft) Quarter Wave base fed with 4 quarter wave radials.	1.12dBi	19 degrees	34.18 + j1.99 ohm
70 Foot Parasol with 120 buried quarter wave radials. 46.533 foot parasol wires.	1.26dBi	24 degrees	28.62 + j0.0006 ohm
70 Foot Parasol with 8 quarter wave elevated gull-wing radials. 51 595 foot parasol wires.	0.51dBi	24 degrees	16.59 + j0 0034 ohm
70 Foot Parasol with 8 quarter wave elevated gull-wing radials. 51.894 foot parasol wires.	0.87dBi	23 degrees	15.16 + 0 0019 ohm
70 Foot Parasol with 8 quarter wave elevated gull-wing radials. 60 012 foot parasol wires.	0.76dBi	23 degrees	12.44 - j0 0044 ohm
70 Foot Parasol with 120 buried 70 foot radials. 46.758 foot parasol wires.	0.59dBi	24 degrees	33.15 + j0.0036 ohm
70 Foot Parasol with 120 buried 70 foot radials. 50.478 foot parasol wires sloping down at 45 degrees.	0.24dBi	24 degrees	27.93 + j0.0037 ohm
70 Foot Paraso with eight 70 foot elevated gull-wing inductively loaded radials. 51.397 foot parasol wires.	-0.43dBi	25 degrees	22.90 - j0.0049 ohm
70 Foot Paraso with eight 70 foot totally horizontal inductively loaded elevated radials. 61.69 foot parasol wires.	-1.15dBi	25 degrees	20.24 + j0 0069 ohm

Table 1

160 Metre Inverted L Antenna

In QST October 2000 Jack Belrose VE2CV describes a method of decoupling a tower from an inverted L antenna supported from the tower. The inverted L vertical section being supported from the top of a tower which also supports a 20 metre yagi may suffer from interaction with the tower due to induced currenbts flowing in the tower. The usual advice being to keep the tower and the vertical as far apart as possible by suspending the vertical from a yardarm Jack shows how the interaction may be minimised

The proposal is to use a decoupling stub spaced 39 inches from one leg of the tower. This is shown in Fig 3. The stub is attached to the top of the tower and tuned at the bottom by a capacitor connected between the tower leg and the stub. The stub is tuned to resonate at the operating frequency. The tuning results in minimum tower base current The stub is tuned by monitoring the tower base current and tuning for minimum. For maximum effect all legs of the tower should be treated with a stub which will result in maximum decoupling of the tower.

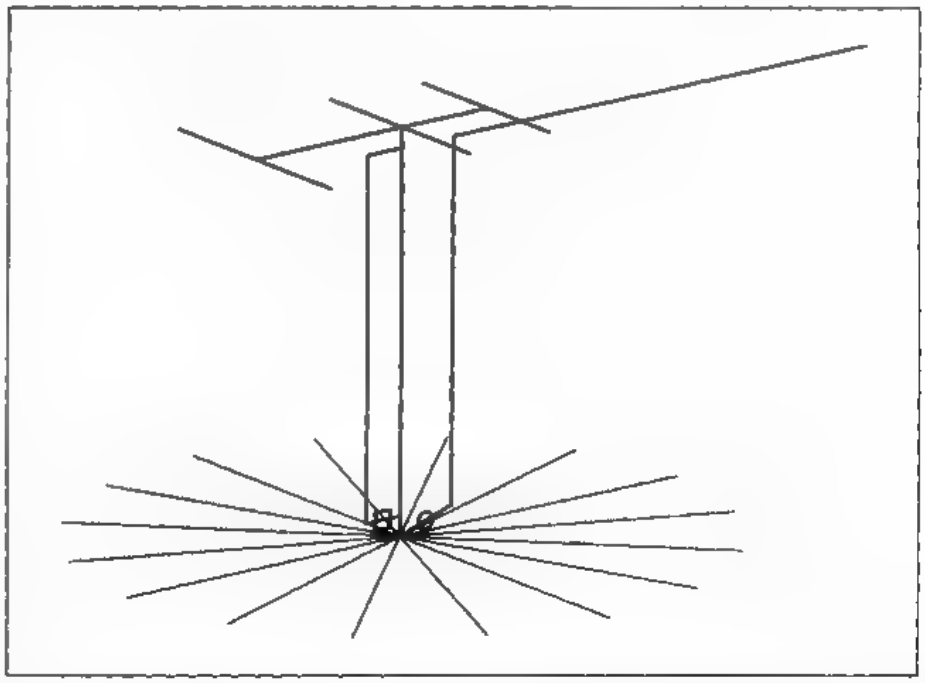


Fig 3. 160 Metre Inverted L supported by a 50 foot tower which also supports a 20 metre yagi. The tower is decoupled by a stub 39 inches from the tower leg The stub is tuned for minimum tower current.

The advantage gained is that the tower supported inverted L with the tower decoupled will have a better pattern with more high and low angle gain in the favoured direction. The favoured direction is the direction opposite to the direction in which the inverte L points

Multivibrator Overtone Crystal Oscillator

Overtone Crystal multivibrators were described in an item which appeared in the Technical Topics column of Pat Hawker G3VA in Rad Com November 2000. The item came from an article in Funk Amateur August 2000 by Herrman Schriber. Also noted was an earlier application in SGS Fairchild Application Report No 170 which is shown in Fig 4 and Fig 5.

The circuits shown in Fig 4 and Fig 5 are multivibrator generators using 32 MHz overtone crystals bult from discrete components.

Using HCMOS logic inverters overtone crystal multivibrators can be built with only a couple of additional components. This is shown in Fig 6(a) and Fig 6(b).

In Fig 6(c) a single inverter is used . This is made posssible by the addition of an inductor and capacitor. The values given for a 32 MHz overtone crystal would provide a starting point for other crystal frequencies. Operation at 50 MHz is claimed to be possible using HCMOS inverter chips such as 74HC00 and 74HC04. You should check the voltage limitations of the chips.

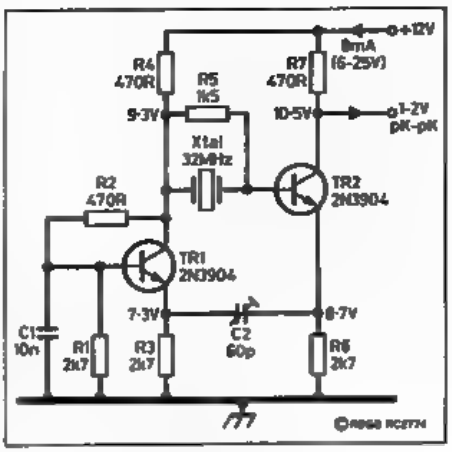


Fig 4. 32 MHz Overtone Crystal Multivibrator.

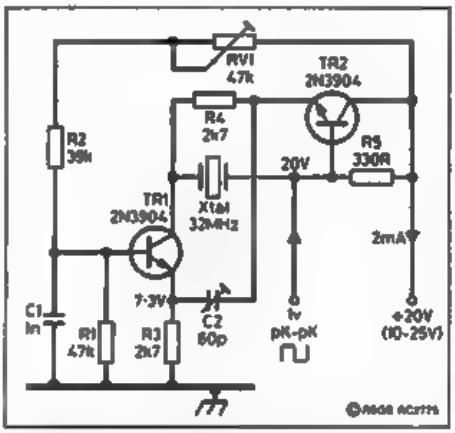


Fig 5. Alternative 32 MHz Overtone Crystal Multivibrator Generator.

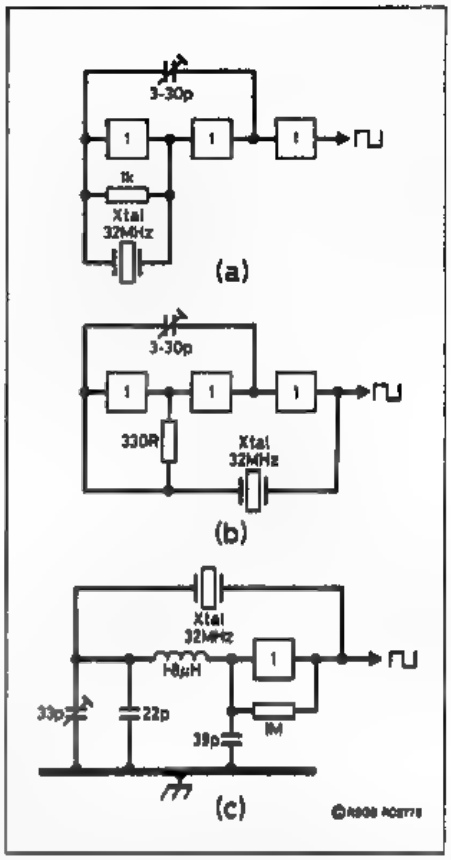


Fig 6. Overtone Crystal Multivibrators using IC Logic Inverters. In (c) the addition of a suitable inductor permits the use of a single logic inverter.

Silent Key

Roger Malcolm Bingham VK4HD 1945 - 2001

Roger VK4HD passed away peacefully late on the afternoon of March 1, aged 55 years.

Roger obtained his limited licence, joined the WIAQ and became a member of the Redcliffe and District Amateur Radio Club around the year 1980. Very soon he was voted to the position of Secretary-Treasurer, where he proved to be popular, hardworking and a very sensible ideas man.

VK4HD's next move was to full call in 1985

A few years later, in 1990, he was given stewardship of President of the WIAQ. He served two terms and one as Vice President until he was suddenly taken seriously ill in 1996. On August 3 of that year he resigned from the WIAQ, ahead lay much medical treatment, hospitalisation and surgery. He was destined never to return to Amateur Radio.

It might be asked what was VK4HD's biggest contribution to AR in VK4 during his 15 years of administrative service. Put simply it was his ability to recruit new members when the Institute was in a period of stagnation, an ability not to be forgotten. Also his natural attributes i.e.; his lucid manner of speech into which he mixed a great deal of wit, suited his official position perfectly.

Another personality trait unknown to many was his generosity carried on after 'Biblical fashion' of not allowing one hand to know what the other was doing!

Past President Roger is survived by his wife Trish, two sons Malcolm and Christopher and daughters Ann-Maree and Janelle.

The WIA offers condolences to the family in their hour of grief and loss. Some comfort may be taken in the knowledge that Roger VK4HD will be part of WIA history as long as it survives and records remain.

VK4SS Alan Shawsmith
WTAQ life member

Spotlight on SWLing

Robin L. Harwood VK7RH

Winter has brought excellent conditions despite Sol playing up badly. Early May saw several major dropouts, with severe HF disruption for up to a week after the flares.

The usual midday propagation on the lower end of HF should continue, despite disappointing 2000 results. This could be due to fewer European broadcasters and not entirely due to propagation.

The China Syndrome

Last month I was hearing Falun Gong clandestine stations between 12100 and 12150 kHz. This informationwas obsolete at press as, mysteriously, the stations disappeared early in April.

Coincidentally, on April 1 an US spy plane was forced to land on Hainan island after colliding with a Chinese jet fighter in international airspace. The US crew were released after a fortnight but the plane is still held and is the centre of a diplomatic dispute between the US and China. The pilot of the jet was killed and diplomatic relations between US and China rapidly deteriorated.

The incident has caused short-wave broadcasting to dramatically increase between the two nations as a result. Also the jamming of stations such as Radio Free Asia (US), the VOA and the Chinese service of the BBC has intensified.

Chinese broadcasts to Taiwan, which mainland China historically regards as a renegade province increased after the US decided to sell Taiwan sophisticated anti-invasion weaponry Taiwan does not jam Chinese programs to the island, but broadcasts emanating from Taiwan have been jammed since the Nationalist Chinese fled to the then Formosa

This jamming is within the 40-metre amateur allocation, especially on 7105 kHz and 7255 kHz, which is shared with broadcasting. The jamming has clearly spilled across our exclusive allocations.

The Falun Gong station was not in Asia; Bulgaria being nominated as a site by some Perhaps diplomatic pressure from Beijing on Bulgaria or the aircraft incident may have stopped them. All I know is that they are not being heard.

Pirates and patriots and the US extreme right on about rights

The US clandestine station, United Patriot Radio (UPR) has been heard often on 3260 kHz on USB, primarily in the USA, around 0200 UTC. I did hear them in Australia on 12182 USB at around 2230Z. The modulation breaks were so many as to be obviously intentional.

Slightly different programs from those on WFUV in Georgia on 12172 USB also came from the Genesis Network. WFUV is FCC licensed. UPR is a pirate, born of a dispute between right-wing organizations and WFUV for non-payment of airtime.

Allegedly, the operator of UPR, Stephen Anderson of Somerset, Kentucky, came up on one of WFUV's short-wave channels after they signed off and made disparaging comments.

The FCC monitors cited Anderson, an amateur, for operating on a channel for which he was not licensed. Anderson then voluntarily relinquished his amateur status as he no longer recognizes the legitimacy of the US government. UPR claim they promote the First Amendment (free speech) and Second Amendment (the right to bear arms).

UPR is operating on or near 6890; deliberately close to WFUV. Irregular, it may already have been raided by the FCC, and possibly FBI, in view of his Second Amendment statement.

DRM : Who knows?

You may have heard recent experimental broadcasts of Digital Radio in existing HF broadcasting allocations. It appears in analogue with English and other European language messages followed by short music bridges. The same announcements are then repeated in digital format (DRM).

Experiments have been conducted from Juelich in Germany, Pori, Finland, and Bonaire in the Netherlands Antilles. I queried an Internet forum if it was possible to receive DRM signals, converting them via a computer soundcard. Joe Buch in the USA answered with some basic facts on DRM:

> "Most analog receivers will not be adaptable to the DRM format All the digital modes you use as examples are much lower in data rate than that which will be used in DRM Because of this, the spectral width of the signal is narrow compared to the IF bandwidth of typical SW receivers With DRM, signal components are contained throughout the IF bandwidth For this reason the time delay across the IF bandwidth must be constant to prevent distortion of the digital signal. Crystal filters and mechanical filters have poor delay characteristics at the edges Phase shift across the audio bandpass will also need to be controlled to do what you suggest. Analog signals generally are not affected by phase linearity For this reason nobody I know is working on a sound card solution
>
> "One of the advantages of the DRM format is that the receivers will be able to follow frequency changes automatically keyed by information in the data stream. Your old analog radio would not be able to do that unless the computer software also had a link to your remotely programmable radio."

As the existing analogue receivers will not be adaptable to decode DRM, I asked about DRM receivers, referring to the AM stereo fiasco, wondering if DRM would end up similarly. Apart from the handful of monitors with DRM receivers, nobody knows how DRM is performing.

It supposedly will offer economic savings to broadcasters and consumers, once sufficient receivers are out there. But nobody is making them!

Disappointingly, because of the proprietary nature of DRM, only the few broadcast engineers doing tests know anything about it. We monitoring DRM signal interference with the adjacent existing analogue signals as these will continue for many decades to come.

Swiss radio: Stiff Cheese

In April, I mentioned that Swiss Radio International (SRI), Berne, was reducing their short-wave output.

Hans Kiesinger of Maroochydore (QLD) sent me the SRI press release, confirming axed broadcasts to Australasia and eastern North America. By the end of October SRI will be only broadcasting to Africa and Asia and this and all other satellite activity will cease in 2004. Then it will be only on the Internet as swissinfo.com.

Well that's all for this month. Good listening these winter months and 73.

ar

DON'T MISS THE ACTION!

YAESU VX-150 5W 2m handheld

Compact yet incredibly rugged, the new Yaesu VX-150 2m handheld is designed to perform under the most demanding conditions. The VX-150's diecast aluminium case provides excellent transmitter heatsinking, allowing 5W RF output as standard, while assisting the radio to meet the tough US MIL-STD 810D/E shock and vibration ratings. A large high-output speaker, heavy-duty belt-clip plus illuminated keypad and LCD screen make the VX-150 a pleasure to use.

Features:

- Tx: 144-148MHz, Rx: 140-174MHz • RF Output: 5W with supplied 700mA/h NiCad pack
- Direct keypad frequency entry, CTCSS and DCS encode/decode, battery voltage metering
- Simple Menu system • Over 200 memories • 7 digit Alpha-numeric memory labelling
- Tx and Rx Battery Savers • Case measures just 58 x 108.5 x 26.5mm WHD
- Comes with FNB-64 7.2V 700mA/h NiCad, flexible antenna, and overnight AC charger

D 648

2 year warranty

$345

NEW FOR 2001

NEW FOR 2001

YAESU FT-1500M Heavy Duty 2m FM Mobile

Another Yaesu transceiver breakthrough, the new FT-1500M blends an efficient transmitter with an almost bullet-proof receiver front end, and is packaged in rugged die-cast aluminium casing. You get powerful 50W RF output, direct keypad frequency entry, Alpha-numeric memory labelling, easy data interfacing, and much, much more.

- Transceiver coverage of the 2m Amateur band (144-148MHz), with extended receiver coverage of the 137-174MHz range
- 50W RF output, with selectable 5, 10, or 25W lower power levels. The efficient PA stage only draws 8A at 13.8V DC for full RF power output.
- High-performance receiver front-end circuitry using Yaesu's renowned Advanced Track Tuning (ATT) tracking bandpass filter design.
- Includes MH-48B6J DTMF microphone for direct keypad frequency entry, plus convenient Menus with 35 "set and forget" functions
- 149 memories are provided, with 130 regular memories, 9 pairs of sub-band memories, and an instant recall "Home" memory.
- Additional features: Supply Voltage Display, transmit Time-Out Timer, Auto Power Off, and S-meter RF Squelch.

D 3638

2 year warranty

$399

SAVE $37

All Yaesu products listed are priced in Australian dollars, and are not stocked in Dick Smith Electronics stores outside Australia. Check our web site www.dse.com.au for further ordering information.

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Yaesu transceivers and accessories stocked in selected Australian stores only. Other Australian stores can place orders on a deposit-paid basis. Offers expire 30/6/2001. All prices shown are in Australian dollars and are inclusive of GST

2577 DPS SCOL

Division Directory

The Amateur Radio Service exists for the purpose of self training, intercommunication and technical investigation. It is carried out by amateurs who are duly authorised people interested in radio technique solely with a personal aim and without pecuniary interest.

The Wireless Institute of Australia represents the interests of all radio amateurs throughout Australia National representation is handled by the executive office under council direction. There is one councillor for each of the seven Divisions. This directory lists all the Divisional offices, broadcast schedules and subscription rates. All enquiries should be directed to your local Division

VK1 Division Australian Capital Territory,
GPO Box 600, Canberra ACT 2601

President	Gilbert Hughes	VK1GH
Secretary	Peter Kloppenburg	VK1CPK
Treasurer	Ernest Hosking	VK1LK

VK2 Division New South Wales
109 Wigram St, Parramatta NSW
(PO Box 1066, Parramatta 2124)
(Office hours Mon-Fri 1100-1400)
Phone 02 9689 2417
Web: *http://www.ozemail.com.au/~vk2wi*
Freecall 1800 817 644
e-mail: *vk2wi@ozemail.com.au*
Fax 02 9633 1525

President	Terry Davies	VK2KDK
Secretary	Barry White	VK2AAB
Treasurer	Pat Leeper	VK2JPA

VK3 Division Victoria
40G Victory Boulevard Ashburton VIC 3147
(Office hours Tue 10.00 -2.30)
Phone 03 9885 9261
Web: *http://www.wiavic.org.au*
[redacted]
e-mail: *wiavic@wiavic.org.au*

President	Jim Linton	VK3PC
Secretary	John Brown	VK3JJB
Treasurer	Barry Wilton	VK3XV

VK4 Division Queensland
PO Box 199, Wavell Heights, Qld. 4012
Phone 07 3221 9377
e-mail: *office@wiaq.powerup.com.au*
Fax 07 3266 4929
Web: *http://www.wia.org.au/vk4*

President	Colin Gladstone	VK4ACG
Secretary	David Jones	VK4OF
Treasurer	Bill McDermott	VK4AZM
Office Mgr	John Stevens	VK4AFS

VK5 Division South Australia and Northern Territory
(GPO Box 1234 Adelaide SA 5001)
Phone 0403 368 066
web:*http://www.sant.wia.org.au*
email: *peter.reichelt@bigpond.com*

President	David Minchin	VK5KK
Secretary	Peter Reichelt	VK5APR
Treasurer	Trevor Quick	VK5ATQ

VK6 Division Western Australia
PO Box 10 West Perth WA 6872
Phone 08 9351 8873
Web: *http://www.vk6wia.org*
e-mail: *vk6wia@linet.net.au*

President	Neil Penfold	VK6NE
Secretary	Christine Bastin	VK6ZLZ
Treasurer	Bruce Hedland-Thomas	VK6OO

VK7 Division Tasmania
PO Box 371 Hobart TAS 7001
Phone 03 6234 3553 (BH)
Web: *http://www.tased.edu.au/tasonline/vk7wia*
also through *http://www.wia.org.au/vk7*
email: *batesjw@netspace.net.au*

President	Phil Corby	VK7ZAX
Secretary	John Bates	VK7RT
Treasurer	John Bates	VK7RT

Broadcast schedules

All frequencies MHz. All times are local.

VK1WI: 3.590 LSB, 146.950 FM each Sunday evening from 8.30pm local time. The broadcast text is available on packet, on Internet *aus.radio.amateur.misc* news group, and on the VK1 Home Page http://www.vk1.wia.ampr.org

Annual Membership Fees. Full $77.00 Pensioner or student $63.00 Without *Amateur Radio* $49.00

From VK2WI 1.845, 3.595, 7.146*, 10.125, 14.160, 24.950, 28.320, 29.120, 52.120, 52.525, 144.150, 147.000, 438.525, 1291.750 (* morning only) with relays to some of 18.120, 21.170, 584.750 ATV sound. Many country regions relay on 2 m or 70 cm repeaters. Sunday at 1000 and 1930. Highlights included in VK2AWX Newcastle news, Monday 1930 on 3.593 plus 10 m, 2 m, 70 cm, 23 cm. The broadcast text is available on the Internet newsgroup *aus.radio.amateur.misc*, and on packet radio.

Annual Membership Fees. Full $78.00 Pensioner or student $61.00. Without *Amateur Radio* $47.00

VK3BWI broadcasts on the 1st Sunday of the month at 20.00hrs Primary frequencies. 3.615 DSB, 7.085 LSB, and FM(R)s VK3RML 146.700, VK3RMM 147.250, VK3RWG 147.225, and 70 cm FM(R)s VK3ROU 438.225, and VK3RMU 438.075. Major news under call VK3ZWI on Victorian packet BBS and WIA VIC Web Site.

Annual Membership Fees. Full $78.00 Pensioner or student $61.00. Without *Amateur Radio* $47.00

VK4WIA broadcasts on 1.825 MHz SSB, 3.605 MHz SSB, 7.118 MHz SSB, 10.135 MHz SSB, 14.342 MHz SSB, 21.175 MHz SSB, 28.400 MHz SSB, 29.680 MHz FM (rptr), 147.000 MHz, and 438.525 MHz (in the Brisbane region, and on regional VHF/UHF repeaters) at 0900 hrs K every Sunday morning. QNEWS is repeated Monday evenings, at 19.30 hrs K, on 3.605 MHz SSB and 147.000 MHz FM. On Sunday evenings, at 19.45 hrs K on 3.605SSB and 147.000 FM, a repeat of the previous week's edition of QNEWS is broadcast. Broadcast news in text form on packet is available under WIAQ@VKNET. QNEWS Text and real audio files available from the web site

Annual Membership Fees. Full $85.00 Pensioner or student $72.00. Without *Amateur Radio* $56.00

VK5WI: 1827 kHz AM, 3.550 MHz LSB, 7.095 AM, 14.175 USB, 28.470 USB, 53.100 FM, 147.000 FM Adelaide, 146.700 FM Mid North, 146.800 FM Mildura, 146.825 FM Barossa Valley, 146.900 FM South East, 146.925 FM Central North, 147.825 FM Gawler, 438.425 FM Barossa Valley, 438.475 FM Adelaide North, ATV Ch 35 579.250 Adelaide (NT) 3.565 USB, 7.065 USB, 10.125 USB, 146.700 FM, 0900 hrs Sunday. 3.585 MHz and 146.675 MHz FM Adelaide, 1930 hrs Monday.

Annual Membership Fees. Full $82.00 Pensioner or student $68.00. Without *Amateur Radio* $54.00

VK6WIA: 146.700 FM(R) Perth at 0930hrs Sunday relayed on 1.865, 3.564, 7.075, 10.125, 14.116, 14.175, 21.185, 29.120 FM, 50.150 and 438.525 MHz, Country relays 3.582, 147.200 (R) Cataby, 147.350 (R) Busselton, 146.900 (R) Mt William (Bunbury).147.000 (R) Katanning and 147.250 (R) Mt Saddleback. Broadcast repeated on 146.700 at 1900 hrs Sunday relayed on 1.865, 3.564 and 438.525 MHz : country relays on 146.900,147.000, 147.200, 147.250 and 147.350 MHz..Also in "Real Audio" format from the VK6 WIA website

Annual Membership Fees. Full $69.00 Pensioner or student $59.00. Without *Amateur Radio* $38.00

VK7WI: 146.700 MHz FM (VK7RHT) at 0930 hrs Sunday relayed on 147.000 (VK7RAA), 146.725 (VK7RNE), 146.625 (VK7RMD), 3.570, 7.090, 14.130, 52.100, 144.150 (Hobart), repeated Tues 3.590 at 1930 hrs.

Annual Membership Fees. Full $85.00 Pensioner or student $72.00. Without *Amateur Radio* $52.00

VK8 Northern Territory (part of the VK5 Division and relays broadcasts from VK5 as shown, received on 14 or 28 MHz).

VK1 notes

Forward Bias

Peter Kloppenburg VK1CPK

By the time you read this, the ACT Division has begun to share accommodation with the Long Gully Scout Group in Longenerong Street in Farrer. Two rooms, in a building that was surplus to the Scout's requirements, are now used for committee meetings, Novice classes, and radio shack. One of the rooms is a lounge where light meals can be prepared, and adjacent to this is a section where shower, wash and toilet facilities are located. In addition to this, the contract allows us to use the scout's sports hall for general meetings once a month. Most importantly, and as every amateur knows, location is very important in regard to putting up antennas and the like, such as towers and radio masts. The area in front of the building provides ample space for this purpose, and is fenced as well. Planning for an antenna farm is in progress, as the Division has accumulated plenty of hardware for this purpose over the years. When the rooms have been fitted out for our purposes with equipment, furniture, tools and storage space, we can truly call it our home. Are you coming too?

Changes of a different kind have been happening at the ACT committee level. Leading up to the Federal AGM, the call went out for filling various positions at WIA Federal. Our Treasurer, Ernest Hocking, nominated for Federal President. He went to Melbourne as an "observer" and came back as WIA President! Another, but local, appointment was that of our Vice-President, Phil Longworth, to that of Alternate Federal Councillor. Phil's appointment became necessary when we looked at the agenda of the Federal AGM. Many important decisions were going to be made, affecting the future directions of the WIA. Our President, Gilbert Hughes, who was appointed Federal Councillor earlier this year, also went to Melbourne for the annual convention.

The next General Meeting will be held on June 25, 2001 at the Scout facility in Longenerong St., Farrer, at 8 pm.

VK4 Notes

Qnews

by Allatair Elrick VK4MV

DX And Net Advice

The Gold Coast Amateur Radio Society of VK4 has turned up the wick and is making some great contacts on their VK4WIG DX nets. These are on Wednesday around 3.605 MHz at 7:30 EST, then on to 20metres on 14.226 MHz at 8.30pm EST. Net controllers are Doc AF4MI, located in Georgia USA and Chris VK2UW and Mal VK6LC in Australia.

VK4WIG would like to hear from any Short Wave Listeners, if they heard the activity and would like a QSL card to confirm any of the QSOs, can write to the GCARS at 85 Harper Street, Nerang 4211, Queensland Australia

New Old Timer

John-Jaques Bon has sat and passed AOCP theory and 5wpm Morse. Not unusual you say? Well except all this at and on his 72nd birthday, obtaining the call VK4JJL. We must congratulate him, especially as his main language is French! He did some theory courses with Redcliffe & Caboolture Clubs and studied by himself. Rick VK4EMA tutored him in Morse. John-Jaques sat the exam with the City of Brisbane Radio Society, this in the middle of that bad storm in the Brisbane area recently.

And is he on air?

You bet, even at 72, restoring a Tri-band beam and putting up his tower! C'est épatant, formidable!

Music On The Airwaves

Jonathan Dimond VK4DJD is both a musician and Ham operator and has passed on this news with connections to both interests.

December this year marks the 100th Anniversary of Marconi's first trans-Atlantic radio transmission, and to celebrate, Arts Queensland, The Brisbane Biennial Festival, and the Brisbane Powerhouse have supported two fine contemporary groups of musicians to put on shows entitled "Airwaves: A century of radio". The performances occur on the evenings of July 24, 28, and November 3.

Jonathan, VK4DJD is the Jazz Department Convenor at the Queensland Conservatorium.

Tel: 3875 6268 or E-mail vk4djd @ qsl.net.

Presentation

Recently at a Redcliffe Radio Club meeting the WIAQ presented Don Clark VK4DC, with his richly deserved Merit Award. Well done Don. This nomination as with that of Laurie VK4BLE was written and researched by Dave VK4OF then nominated by Bill McCarthy VK4WMC.

Don't forget, you need not wait till years end to submit a nomination, when you see someone doing an exemplary job for Ham Radio, like Don, send a nomination into the WIAQ PRONTO!

continued next page

Cop This

Have you ever been stopped by the police and questioned as to what that mobile or hand held is for and do they understand just what Amateur Radio is? Yes and No, in that order, says a VK4 Amateur. Having been stopped for a 'routine licence check', the officer spotted VK4AKP's Handy and proceeded with - What's the radio for? Amateur Radio, what's that? I have never heard of it... Why do you have it with you? Can you listen to our radio transmissions with it?

Perhaps it is time we sent out a complementary flier or even cheaper than that; E-mail's to major police and rescue services outlining what Amateur Radio & WICEN is all about. Maybe worth carrying that copy of your ACA licence at all times too.

Tall Poppy Lopped

The Cairns Amateur Radio Club has had repeater equipment installed on Mt. Bellenden-Ker for the past 25 years. The location, which is almost the highest point in Queensland, has provided 2-metre voice repeater coverage for a huge service area up and down the coast and inland to the Atherton Tablelands. The 2-metre Digipeater has provided the packet link from Townsville to Cairns for many years and as yet, no alternative has been found to maintain this link. The Club has been struggling to meet the site fee, which was imposed a few years ago and has regrettably decided that it can no longer continue to maintain this facility. The VK4RCA 2-metre voice repeater and VK4RCA 2-metre Digipeater will therefore cease to operate before 30th June 2001. The actual date for removal of the equipment is still to be decided.

A New Home

Some busy negotiations and no small amount of lobbying have resulted in the Sunshine Coast Club having a new home. The new club house, in one of the old motorway toll booth buildings. Then how's this for a generous mob! The Sunshine Coast Club members really do get behind their club, Angus VK4QV has donated a tower to the new club rooms, Bernie VK4BBH 12 chairs, Ron VK4GZ an 8 pint electric kettle and June VK4SJ a three burner gas barbecue! I can't wait for the "house warming party".

Presidential Plane Talk

(The VK4WL progress report)

Further to last month's news, we've heard more about Bill VK4WL, Intrepid Ultralight Pilot, via WIAQ VP Far North Region Dale VK4DMC. At last report on Sunday April 15th Bill was in Middlemount, Central Queensland safe and sound after breaking a wing on the ultralight! Bill will be on the way again shortly after he solves this "niggly engineering problem". As they say "on a wing and a prayer!"

VK3 Notes

Website www.wiavic.org.au Email wiavic@wiavic.org.au

By Jim Linton VK3PC

AR Magazine

The new Amateur Radio magazine deadline for VK3 Notes and all material implemented to restore the delivery of WIA journal closer to the start of each month is most welcome.

A memo from the recently re-appointed Editor, Colwyn Low VK5UE, to all contributors, has put in place a tighter production schedule.

In another change to AR magazine, it will be publishing some appropriate articles from overseas journals. With the high cost of foreign magazines due to the Australian dollar exchange rate, now make them prohibitive to most radio amateurs.

It will be good to see some high quality articles from the journals of other radio societies, appear from time to time in Amateur Radio.

Centenary of Federation

Among the many reflections to be made in this, the year of the Centenary of Federation, will be the role of radio communications. One particular event, Australia's first official ship-to-shore wireless communication, occurred on 6 May, 1901 at Queenscliff, Victoria. This milestone in communications is clearly of national significance, and is an integral part of the centenary of federation. To celebrate the centenary of federation and the the communication achievements over the past 100 years, WIA Victoria has a special event station VI3PMG on air until the end of August.

WIA Victoria
40G Victory Boulevard Ashburton 3147
Tel. 9885 9261 Fax. 9885 9298

VK2 Notes

By Pat Leeper VK2JPA

Due to the lack of a quorum, the VK2 Division Annual General Meeting was re-scheduled for 19th May. As this column was written before the date, I cannot tell you if a quorum was reached this time. However, the new Board of Directors was notified in the May issue of AR, and only needs to be ratified at the coming meeting.

Due to the re-scheduling of the VK2 Annual General Meeting, the Conference of Clubs meeting due in May has been moved to 16th June - please note - 16th June 2001 at Amateur Radio House Parramatta Clubs were notified of the change of date by email by the Secretary

Finally - does anyone know of tests of power line data transmissions outside of the South Coast one? If you do, we would like to hear about it. Email us at vk2wi@ozemail.com.au.

More news next month

VK7 Notes

QRM Tasmanian Notes

Things certainly quieten down around the State as the shorter days arrive. Both the northern and the southern Branches have been favoured at their May meetings with an address by Rex Moncur, VK7MO, on the ramifications of the new E.M.R. regulations to amateur installations. It would seem that provided commonsense is the criteria for any installations most amateurs will not have any problems abiding by these regs. Rex had us all answering a long list of questions related to our own installations to test our own compliance.

The southern branch has ceased their famous foxhunts until Spring. The north-west branch has got all their repeaters working again after a break-in on the 3000 ft. Mt.Duncan site resulted in the loss of one of our solar panels which cut our battery power. We have now installed alarms that will tell us all that someone is doing the wrong thing up the mountain. Amazing, isn't it that some idiot will climb that height and carry a big panel back down the mountain. Must have wanted it very badly!!.

The Tasmanian branch welcomes the new Federal directors including, of course, our new Federal President as they say, "thrown in at the deep end". We thank Peter Naish for his untiring work over the past years. The new executive can be assured of our Tasmanian support.

Cheers for now Ron, VK7RN

John Kelleher VK3DP, Federal Awards Officer
4 Brook Crescent, Box Hill South Vic 3128, (03) 9889 8393

Back on deck again, with renewed vigour (if that is possible). Applications for WIA awards are still being received accompanied with a fee of only USD5.00. It must be all of 18 months ago that fees were raised to USD10.00. Because of this shortfall, I am forced to delay sending out awards until I have sufficient funds to do so.

I am trying to clear up this situation before I hand over the reins of Federal Awards Manager, coming up in August. It is my intention to resign immediately after publication of the WIA DXCC listings (August edition).

Two Pacific Island entities have given notice that their QSL bureaux are now closed. They are ZK1 Cook Islands, and A3, Tonga. If you require QSL cards for contact with these two countries, it will have to be direct to the station concerned, or through a QSL Manager.

Those among you who were lucky enough to work VK9RS (Rowley Shoals) may now include VK9RS in any applications for WAVKCA awards. This special call sign was issued to Mal, VK6LC by the ACA, and so becomes official.

The following are listed as being the top 10 most wanted countries (entities).

1. P5 North Korea
2. BS7H Scarborough Reef
3. E4 Palestine
4. FO 0xxx Austral Islands
5. FO 0xxx Marquesas Islands
6. H40 Temotu Province
7. BV9P Pratas Island
8. VU4 Andaman & Nicobar Isls.
9. 7O Yemen
10. A5 Bhutan.

If I were to proffer any comment on this list, it would be that the list was not altogether true. I can think of several other entities that could be included. This list was taken off the Internet!!

Northern Ireland: Six counties Award.

Earn 12 points by contacting GI stations. Club station GB4SPD = 3 points and all other GI stations = 1 point. You need at least one contact from each of the six counties of :-Armagh, Antrim, Down, Fermanagh, Londonderry, and Tyrone. All bands and modes. SWL OK. No time limitations. No repeater contacts. GCR list and fee of UK two pounds or 8 IRCs go to :-Ivor McKinney, "Wyn Vor", 175 Staffordstown Road, Randalstown, County Antrim, Northern Ireland BT41 3LT.

Papua-New Guinea: Bird of Paradise Award

Contact P29 stations after 16 September 1975. Oceania stations need 7 contacts in at least 5 provinces, while others must contact 5 in at least 3 provinces. GCR list and fee of 10 IRC (or equivalent) goes to: -Awards Committee, P.O.Box 204, Port Moresby, Papua – New Guinea.

The Provinces are: Capital District, East Sepik, Milne Bay, Southern Highlands, Central, Enga, Morobe, West New Britain, Chimbu, Gulf, New Ireland, Western, East New Britain, Madang, Northern, Western Highlands, Eastern Highlands, Manus, North Solomon and West Sepik.

Puerto Rico: Zone 8 Award.

Work 8 KP4 and 1 each of 8 other CQ Zone 8 countries on any band or mode. GCR list and fee of US$1 00 or 4 IRCs to: -Radio Club of Puerto Rico, PO Box 1061, San Juan, P.R. 00901.

Thailand: The Siam Award.

Contact any 10 HS stations. No time limit. SWL OK. GCR list and fee of 10 IRCs for surface mail or 15 for airmail, to: -Hans D Hollstein HS1BG, Awards Manager, 86/1 Sukhumvit soi 23, Bangkok 10110, Thailand.

Best 73, and thank you for your continued interest in awards, de John VK3DP

ar

DX Notes

Ross Christie, VK3WAC
19 Browns Road, Montrose 3765, Vic.
Email Vk3wac@aol.com

First, thank you Jim VK6JP for the information on the Meissner Signal Shifter mentioned in last month's *DX Notes* Jim says he used one shortly after the war at the RAN Belconnen transmitting station in Canberra where he was stationed from 1947 until 1949. Apparently the unit is an external VFO for a transmitter.

It was ruggedly built, he remembers, appromimately 18" x 15" x 9". There was an internally regulated power supply using VR150 regulator valves. When Jim was at Belconnen he remembers that it was used to excite an American THR transmitter (8kW on CW) that had a faulty VFO. Spare parts were difficult to come by for the THR so the Meissner unit was pressed into service and performed faultlessly while he was there and "probably long after". He reckons that it was a "beautifully engineered piece of equipment; if not a Rolls-Royce then certainly a Cadillac". He thinks it covered up to 20MHz at least and perhaps to 30MHz.

There was a very interesting article in one of 'The Daily DX' bulletins regarding a QSO conducted across the Atlantic Ocean on 136kHz. The CW QSO (an exchange of signal reports) began on 5th February and finished on 19th February. No, the operators were not incompetent! The QSO between Laurence, G3AQC (UK) and Larry, VA3LK (Eastern Ontario, Canada) was conducted via very slow Morse using a software package, ARGO. This presents the Morse characters in a visual format on a PC monitor screen. Each 'dit' was 90 seconds long and a 'dah' 180 seconds. The equipment at each end was a mixture of homebrew transmitters and commercial receivers. Wavelengths at these frequencies are about 2200 metres long (imagine erecting a dipole for this band!) and amateur antennas can be expected to be very inefficient. At G3AQC the ERP was approx 350mW. The web page at http://www.rac.ca/infodx htm has some very interesting information on LF operating and is well worth a visit.

Some years ago a VK3 station was granted an experimental licence for operating at or near these frequencies (approx. 176kHz I think) and signals were transmitted to gain information on propagation via signal strength reports. Perhaps the WIA should make an approach to the ACA regarding access to a band at VLF, preferably on 136kHz. Many countries now have access to it (New Zealand certainly has) and I see no reason preventing VK amateurs enjoying the same privilege. If amateurs in Europe can achieve communication over some hundreds, sometimes thousands of kilometers then we in Australia, with our wide open spaces and lower background noise (especially in the outback), should be able to equal or surpass these achievements. Space is at a premium in the HF, VHF, UHF and µwave bands but surely a narrow slot could be found at these lower frequencies, especially as we are destined to lose part of the 70cm band!

The DX

3C, Equatorial Guinea. Martin, 3C5J will be operating from an oil platform for the next six months. This activity will not count for DXCC, but there is a possibility to operate from Malabo. Visit Martins web page for more info at http://www.cleddau.com/3c5j/cw.html [TNX The Daily DX and 425 DX News]

4N8, Kosovo, Yugoslavia. Boyan, LZ1BJ, was signing 4N8/LZ1BJ from Pristina this past week. He seems to be active on the bands 40 to 10 metres on CW and SSB. QSL via his home callsign. [TNX OPDX]

8Q, Maldives. Phil, G3SWH will be in the Maldives (AS-013) between the 4th and 11th of June. He will be using the call 8Q7WH. Phil will be on air when time allows on all bands from 40 to 10 metres. Operation will be on CW. QSL is via G3SWH either direct or through the bureau. [TNX G3SWH and 425 DX News]

9A, Croatia. Franjo, 9A2MF, has begun operating from the Croatian lighthouse Savudrija. Franjo is the lighthouse keeper and has been a keeper for twenty years with service on many of Croatias lighthouses. SAVUDRIJA is his most recent posting and he will be here for the next several years. Franjo wasted no time in erecting an antenna on the lighthouse building. The "Lighthouse Savudrija" is valid for Croatian LightHouse Award (CLH-73). Hams interested in the Croatian LightHouse Award can find more information and details at http://www.qsl.net/9a7k [TNX 9A2MF, 425 DX News and OPDX]

9Q, Congo. Pierre, HB9AMO, is back in Congo, he expects to be there until late July. He hopes to be able to operate with the call he used in 1997 (9Q5BQ). If he can gain permission to operate he will try the bands 40 – 10 metres, CW only. Pierre is hoping to get on the air during his free time in the evenings and weekends. QSL via HB9AMO, Pierre Petry, 3 Hutins-des-Bois, 1225 Chene-Bourg, Switzerland. [TNX HB9AMO and 425 DX News]

C9, Mozambique. Joe, G3MRC (also 5X1P) is going to be in Mozambique for the next three months. He has applied for, and hopes to be issued, a licence when he arrives. [TNX G3MRC and The Daily DX]

E4, Palestine. Gunter, E4/OE1GZA is going to be in Palestine until the end of 2002. He says he will be active mainly on Saturdays. Currently he is active on 30 – 10 metres but later this year hopes to get on 40 and 80 metres as well. QSL direct to Gunter Zwickl, c/o SICT, P.O.Box 1133, Ramallah, Palestine. QSLs can also be sent via the buro to OE1GZA however, please note, that "due to the operator's permanent absence from OE it will take a real long time to respond". [TNX OE1GZA and 425 DX News]

EA9, Spain. Yuki, JI6KVR intends to operate as EA9/JI6KVR from Ceuta from the 8th until the 12th of June. QSL is via EA5KB (Jose F. Ardid Arlandis, Apartado 5013, 46080 Valencia, Spain). [TNX JI6KVR and 425 DX News]

FP, St Pierre & Miquelon Islands. Wendell, K4JZ, will mount what he calls "The Poor Boy DX-Pedition" from the 14th until the 18th of June. Wendell says he will operate from FP using the call FP/K4JZ Operations will be on 40-10 metres SSB. QSL to K4JZ with a SASE.

Wendell says that this is a one-man operation, and any donations will be appreciated. [TNX K4JZ and OPDX]

GJ, Jersey. Rainer, DL1ZBO, Tilo, DJ5BX and Ekki, DF4OR will be signing the prefix MJ/ from the island of Jersey on the 7th until 12th of June. Rainer and Ekki will participate in the ANARTS Contest and will be active on CW and SSB before and after the contest. [TNX DF4OR and 425 DX News]

JT, Mongolia. Nicola, I0SNY, Gianni, I8KGZ and possibly a number of others will be active from Mongolia beginning the 29th of May. They are planning to use the call JT1Y from Ulaan Baator and also to operate from call area 7 too. [TNX I0SNY and 425 DX News]

SV5, Dodecanese. A recent report in OPDX says Carl, GW0VSW, will be active from Dodecanese as SV5/GW0VSW from 16th until 30th of June. Activity will mainly be CW on all bands from 40 – 10 metres. Carl hopes to be active around 0500-1600 UTC. He will be using an IC-706 with dipole antennas. He will be frequenting the IOTA and QRP frequencies. QSL via GW0VSW. [TNX GW0VSW, The Daily DX and OPDX]

VE, Canada. Fred, K2FRD intends to operate as VO2/K2FRD from zone 2 from approx. 6th June until the end of August. He hopes to be active on 40 - 10 metres on SSB and CW. Fred will be operating from a tent about 90km West-Southwest of Churchill Falls, Labrador (I hope he has an anti-aircraft gun as the flies in Labrador are huge, ferocious and fly around in squadrons). QSL is direct only to K2FRD, Fred Stevens, 263 Keach Rd, Guilford, NY 13780, USA. [TNX K2FRD and 425 DX News]

VK8, Troughton Island. Dan Holloway, VK8AN is going to be active from Troughton Island (OC-154) as VK8AN/6. He hopes to pay a number of visits to the island between April and June. By the time you get to read this you should be ready for his 5th – 19th June visit. He will operate in his spare time between 0300 and 1300 UTC on the 10, 15 and 20 metre bands. However, this time he will have a linear amplifier along with him. He might try a vertical on either 12 or 17 metres and a long wire for 40, 80 and 160 metres. QSL direct only to VK4AAR, Alan Roocroft, P.O. Box 421, Gatton 4343, Australia. [TNX VK4AAR, VA3RJ and 425 DX News]

ZA, Albania. Loreto, IK7VJP will be staying in Albania for two months and expects to be able to operate as ZA1/IK7VJP from Durres (Durazzo). QSL is via his home call either direct or through the bureau. [TNX IK7VJP and 425 DX News]

Dxpeditions

JW, Prins Karls Forland. A multi-national team will mount a DXpedition to Prins Karls Forland (EU-063) from the 1st until the 9th of June. The callsign to be used is JW0PK and the team will be active on all bands and modes. A list of suggested frequencies is given below.

CW 1822, 3505, 7005, 10105, 14020, 18080, 21020, 24895, 28020, 50095 and 144025 kHz;
SSB 1840, 3790, 7060, 14195, 18145, 21295, 24950, 28460, 50145 and 144250 kHz;
RTTY 14080, 21080 and 28080 kHz;
PSK31 14071, 21071 and 28071 kHz;
FM 29200 kHz.

QSL can be direct via SP5DRH, Jacek Kubiak, P.O. Box 4, 00-957 Warszawa, Poland or through the bureau. Further information on the DXpedition can be found on the operation web page at http://www.dxpedition.org [TNX IK2XDE and 425 DX News]

IOTA Activity

I received a short note from Gwen VK3DYL that a group of YL operators are off on another DX holiday, this time to **Aland Island**. The group will meet up with a team of Scandinavian YL's and will operate from the contest station of Martii OH2BH using the special call OH0YLS (Young Ladies Society). The operation is from 30thJune until 6th July. Gwen says exact numbers of operators or details of the QSL route have not been finalised but at least three of the YL's were on the Norfolk Island trip.

AS-056. Masa, JA6GXK, is planning on being active from **Danjo Archipelago (Meshima Island)** during a number of visits to the island. By the time you read this we will have missed his April and May visits but hopefully he can be caught during his 1st until 12th of June visit. Masa points out that this is not a DXpedition and he will only be active during his spare time from the lighthouse on Meshima Island. He suggests that we try catching him on 7 MHz, 14260 +/-10kHz or 21260 +/-10kHz. QSL only via the Bureau to JA6CXK.

Special Events

The International Lighthouse/Lightship Weekend will take place on 18th and 19th August. Last year's event was a huge success with hundreds of stations converging on the nearest lighthouse for a bit of fun on the air. This is not a contest, it is simply a chance to get on the air from an unusual location. More details will be posted in the July issue of AR. Details of this event can be found on the Internet at http://www.vk2ce.com/. [TNX GM3SUC and The Daily DX]

Round up

Various reports on the recent D68C operation reveal a few interesting facts and figures. The team of operators must have had a very busy time on the air. The total number of QSO's was over 160,000. This is a spectacular achievement and included over 4000 RTTY contacts, more than 1000 PSK-31contacts and 3200 on FM. The D68C operators clocked up an impressive 278 contacts in the first hour alone! The weather was extremely hot with temperatures reaching over 50°C. The heat and sunburn gave everyone a bit of a hard time and the local fauna did not make conditions any easier, the ticks made themselves very conspicuous. The supply boat, which ferried their meals from the ship, was capsized by large waves. These guys should be thanked for their efforts and a job well done. [TNX OPDX and The Daily DX]

Kirill, UA6CT, is currently working as a Russian television reporter in **Chechnya**. This will be a good opportunity to work this rare Oblast, the current crisis in the country makes amateur operation rather difficult. He will be operating with simple equipment, 100 watts and dipole antennas, in his spare time. QSL via RK6AXS, either direct or bureau. [TNX UA6CW and OPDX]

Sources

Thanks to those who supply information for this column and for permission to use excerpts from the various DX bulletins and magazines This month our thanks go to VK3DYL, G3SWH, 9A2MF, HB9AMO, G3MRC, OE1GZA, JI6KVR, K4JZ, DF4OR, I0SNY, GW0VSW, K2FRD, VK8AN, VK4AAR, IK7VJP, IK2XDE, JA6GXK, GM3SUC,UA6CW, The Daily DX, OPDX and 425 DX News

Contests

Contest Calendar June – August, 2001

June	9	QRP Day	(CW)	(May 01)
June	9	Portugal Day Contest	(SSB)	
June	9	Asia-Pacific Sprint	(SSB)	(May 01)
June	9/10	WW South American CW Contest		
June	9/10	ANARTS WW RTTY Contest		
June	16/17	VK Novice Contest		(May 01)
June	16/17	All Asian DX Contest	(CW)	
June	23/24	Marconi Memorial Contest	(CW)	
June	23/24	ARRL Field Day	(All Modes)	
July	1	RAC Canada Day Contest	(CW/SSB)	
July	7/8	Internet 6m Contest	(CW/SSB)	
July	14/15	IARU HF World Championship	(CW/SSB)	
July	21	Pacific 160 Metres Contest	(CW/SSB)	(May 01)
July	21/22	SEANET Contest	(CW)	
July	28	Waitakere Sprint	(SSB)	(June 01)
July	28/29	Russian RTTY WW Contest		
July	28/29	IOTA Contest	(CW/SSB)	
Aug	4	Waitakere Sprint	(CW)	(June 01)
Aug	4	European HF Championship	(CW/SSB)	
Aug	4/5	Ten-Ten Summer QSO Party	(SSB)	
Aug	5	YO DX Contest	(CW/SSB)	
Aug	11/12	Worked All Europe DX Contest	(CW)	
Aug	18/19	Remembrance Day Contest	(All)	(June 01)
Aug	18/19	Keymen's Club of Japan Contest	(CW)	
Aug	25/26	ALARA Contest	(CW/SSB)	

It's time to think about the Remembrance Day (RD) Contest again. Although two months away yet, the rules are published this month to give plenty of time for everyone to prepare their stations. Please take this opportunity NOW! And at the same time, don't forget the other local contests, viz. Novice, ANARTS RTTY, Pacific 160 metres and Waitakere Sprints (see dates in Calendar).

Results IOTA 2000

(VKs only)
(Posn\call\score)

CW 12 hours			SSB 12 hours		
22	VK4UW	89526	16	AX4EJ	306,516
17	VK6NU	291,060			
75	VK5EMI	2,516			
85	VK2CZ	300			

Congratulations to all of these contestants.

Waitakere Sprints 2001

There is one rule change from last year.

THE NEW SECTION for Dual Operators has been dropped for lack of support

The contests are of one-hour duration on 80m, and are open to all licensed amateurs in ZL, VK and Oceania call areas.

Object of the Sprints.

The operator's basic goal in the sprints is to make as many contacts as possible, without duplication, during an hour of operation on a single band. Any contact with ZL, VK or Oceania stations on 80 during the contest period can be counted, but a station may be claimed only once.

Eligibility

The Waitakere Sprints are open to all licensed amateurs anywhere in the ZL, VK and Oceania call areas. SWL logs will also be welcome.

Contest Periods

Phone	1000 to 1100 UTC, on July 28th 2001
CW	1000 to 1100 UTC, on Aug 4th. 2001

Frequencies

Phone Frequencies between 3.550 to 3.700 may be used.
CW Frequencies between 3.500 to 3.550 may be used.

Power

In fairness and consideration to others we request that NO LINEAR AMPLIFIERS be used in the contest

Contest call

CQ Sprint, CQ Test or CQ Contest.

Exchanges

Minimum exchange for a valid contact will consist of a serial number, sent and received. The serial numbers must start at 001 and increment by one for each contact made.

Note: - Time and signal reports are no longer required.

Awards

Certificates will be awarded to the overall winner and to the best score in each ZL call area and to the best three scores from VK/Oceania. Other certificates may be awarded at the discretion of W.S.R.C.

Special Awards

To encourage contestants to enter both Sprints we have decided to issue a Special Certificate to the entrant with the Highest combined score. The method of calculation will be- (Phone points+ CW Points) x 2.

All logs received will be considered for this award. To qualify for the multiplied points each log must contain a minimum number of valid contacts. I.e. Ten (10) for Phone, and Five (5) for CW.

Logs

A separate log must be submitted for each Sprint and must be clearly marked PHONE or CW.

Contest logs must show for each contact: - Callsign of station worked, serial number sent, serial number received.

SWL logs must show both Callsigns in the QSO also both serial numbers.

Logs may be sent by Packet Radio please use three columns only with no commas or other delimiters. Any logs received by packet will be acknowledged by the same medium.

Logs are to be in the hands of the contest manager,

ZL1BVK. Alex.Learmond, 14 Takapu Street Henderson Auck. 1208.

Packet to ZL1BVK @ ZL1AB. Email zl1bvk@xtra.co.nz

no later than 1st September 2001

Operator Information

Each log must show the following details: Mode; Callsign; Name; Address; Operating area (e.g. ZL1, ZL2); Total Number of contacts claimed, a declaration that the operator has abided by the rules and spirit of the contest

Any entry which is clearly in violation of the rules or spirit of this contest or which contains an excessive number of duplicate contacts (this does not refer to duplicates which have been indicated as such and are not claimed) may be disqualified. The decision of W.S.R.C.Inc. In respect of interpretation of these rules, the granting of awards and disqualifications will be final and no correspondence will be entered into.

Alex.H Learmond ZL1BVK Contest Manager W.S.R.C.

2001 Remembrance Day Contest

18/19 August 0800z Sat - 0759z Sun

Presented by Alek Petkovic VK6APK

Purpose: This contest commemorates the amateurs who died during WWII and is designed to encourage friendly participation and help improve the operating skills of participants. It is held close to 15 August, the date when hostilities ceased in the southwest Pacific area. It is preceded by a short opening address by a notable personality transmitted on various WIA frequencies during the 15 minutes prior to the contest. During this ceremony, a roll call of amateurs who paid the supreme sacrifice is read.

A perpetual trophy is awarded annually to the WIA Division with the best performance. The name of the winning Division is inscribed on the trophy, and that Division then holds the trophy for 12 months. The Division also is given a certificate, as are leading entrants.

Objective: Amateurs in each VK call area will endeavour to contact amateurs in other VK call areas, ZL and P2 on **Bands** 1.8 - 30 MHz (no WARC). On 50 MHz and above amateurs may also contact other amateurs in their own call area.

Contest Period: 0800Z Saturday, 18 August to 0759Z Sunday, 19 August 2000. As a mark of respect, stations are asked to observe 15 minutes' silence prior to the start of the contest, during which the opening ceremony will be broadcast.

Rules:

1. **Categories:**
   (a) High Frequency for operation on bands below 50 MHz.
   (b) Very High Frequency for operation on and above 50 MHz;
   (c) Single Operator;
   (d) Multi-operator;
2. Within each Category the **Sections** are·
   (a) Transmitting Phone (AM, FM, SSB, TV);
   (b) Transmitting CW (CW);
   Note: Digital modes such as Packet, RTTY, AMTOR, PSK31 etc are excluded from the contest.
   (c) Transmitting Open (a) and (b);
   (d) Receiving (a), (b) or (c).
3. All amateurs in Australia, Papua New Guinea and New Zealand may enter the contest, whether their stations are fixed, portable or mobile.
4. Cross-band and cross-mode contacts are not permitted.
5. **Call** "CQ RD", "CQ CONTEST" or "CQ TEST".
6. On bands up to 30 MHz stations may be contacted once per band using each mode, i.e. twice per band using CW and Phone.
7. On 50 MHz and above, the same station in any call area may be worked using any of the modes listed at intervals of not less than two hours since the previous contact on that band and mode
8. Both single and multi-operator entries are permitted. To be eligible as a single operator, one person must perform all operating and logging activities without assistance, using his or her own callsign More than one person can

use the same station and remain a single operator providing that each uses his or her own callsign, submits a separate log under that callsign and does not receive operating or logging assistance in any way during the contest

9a. Multi-operator stations are only allowed one transmitter per band/mode at any one time. Simultaneous transmissions on different bands are permitted. Simultaneous transmissions on the same band but different modes are permitted.

9b. Automated operation is not permitted. The operator must have physical control of the station for each contact. CW and voice keyers are permitted, as is the use of computers for logging.

10. For a contact to be valid, numbers must be exchanged between stations making the contact.

10. **Exchange** RS for phone and RST for CW, followed by three figures commencing at 001 and incrementing by one for each successive contact.

11. Contacts via repeater (including satellite) are not permitted for scoring purposes. Contacts may be arranged through a repeater. Operation on repeater frequencies in simplex is not permitted.

12. **Score:** on 160m two points per completed valid contact; on all other bands one point; on CW double points.

13. **Logs** should be in the format shown below and accompanied by a **Summary Sheet** showing callsign; name; address; category; section; for multi-operator stations a list of the operators; total score; declaration: **I hereby certify that I have operated in accordance with the rules and spirit of the contest**; signed; date.

14. Entrants operating on both HF and VHF are requested to submit **separate logs and summary sheets** for each category.

15. VK entrants temporarily operating outside their allocated call area, including those outside continental Australia as defined for DXCC, can elect to have their points credited to their home Division by making a statement to that effect on their summary sheet(s).

16. **Send** logs and summary sheets to: RD Contest Co-ordinator, A Petkovic VK6APK, 26 Freeman Way, Marmion, WA 6020, by Friday 21 September, 2001. Endorse envelope **"Remembrance Day Contest"** on front outside. Late entries will not be eligible.

17. Certificates will be awarded to the leading entrants in each section, both single and multi-operator; in each Division; P2 and ZL. Entrants must make at least 10 contacts to be eligible for awards, unless otherwise decided by the Contest Manager

18. Any station observed as departing from the generally accepted codes of operating ethics might be disqualified.

Determination of Winning Division:

Unless otherwise elected by the entrant concerned, the scores of VK0 stations will be credited to VK7 and the scores of VK9 to the mainland call area that is geographically closest. Scores of P2, ZL and SWL stations will not be included in these calculations.

For each Division, an "improvement factor" will be calculated as follows:

(a) For transmitting logs only, HF and VHF "Benchmarks" for each Division will be established, against which its performance for the current year is judged. The same formula will be used for HF and VHF, inserting the appropriate figures:

$$B = 0.25P + 0.75L$$

where B = this year's benchmark, P = last year's total points, and L = last year's benchmark.

(b) For each Division, HF and VHF Improvement Factors will then be calculated. Once again the same formula will be used for both HF and VHF, inserting appropriate figures:

I/F = Total points (this year)/Benchmark

where I/F = improvement factor.

(c) For each Division, the HF and VHF Improvment Factors will then be averaged:

Overall I/F = (HF I/F + VHF I/F)/2.

(d) The Division which achieves the highest overall improvement factor will be declared the winner.

2001 Benchmarks

These are the total scores that must be obtained by each Division to improve on its results of last year:

Div	HF	VHF
VK1	680	152
VK2	4693	65
VK3	3852	8727
VK4	4050	1219
VK5/8	4039	1467
VK6	2670	4504
VK7	1841	1025

Receiving Section Rules

1. This section is open to all SWLs in Australia, Papua New Guinea and New Zealand. No active transmitting station may enter this section.
2. Rules are the same as for the Transmitting Section.
3. Only completed contacts may be logged, i.e. it is not permissible to log a station calling CQ.
4. The log should be in the format shown below.

LOG and Summary Sheet Formats

Example Summary Sheet

Remembrance Day Contest 2001

Callsign: VK3$^*
Name: Jim Wombat
Address: Big Hole, Stumpy Gully, 3195
Category: HF/Single Operator
Section: Transmitting CW
Total Score: 1000
Declaration: **I hereby certify that I have operated in accordance with the rules and spirit of the Contest** *
Signed: Jim Wombat
Date: 30 August 2001

Example Transmitting Log

Remembrance Day Contest 2001

Callsign: VK1XXX
Category: HF/Multi Operator
Section: Transmitting Phone

Time (UTC)	Band	Mode	Call	Nr Sent	Nr Rcvd	Pts
0801	14	SSB	VK2QQ	58001	59002	1
0802	14	SSB	VK6LL	59002	59001	1
0806	14	SSB	VK5ANW	59003	59001	1
0808	14	SSB	ZL2AGQ	56004	57004	1
0811	14	SSB	VK4XX	59005	59008	1

Example Receiving Log

Name/SWL Nr: L33071
Category HF
Section: Receiving Phone

Time (UTC)	Band	Mode	Calling	Calling	Nr	Nr	Pts
0801	14	SSB	VK1XXX	VK2QQ	58001	59002	1
0802	14	SSB	VK1XXX	VK6LL	59002	59001	1
0806	14	SSB	VK5ANW	VK1XXX	59001	59003	1
0809	14	SSB	VK7AL	VK2PS	59007	58010	1

The 2000 Oceania DX Contest

Congratulations to all the winners in the 2000 Oceania DX Contest. Conditions were not great but there were still plenty of high scores and happy punters.

Oceania Phone Results

Martin Luther VK5GN is the winner of the Oceania Single Operator All Band Phone category and first recipient of the new Ron Wills ZL2TT Memorial Trophy. He scored 3.39M points which sets a new record for this category.

Top place in the Multi-Operator Multi-Band Phone category goes to the Wellington Amateur Radio Club who used their big antenna farm at ZL6QH to achieve 3.73M. The other multi-op teams at VK4WIL and ZL3DXC were not far behind.

May Excell VK5AM put in an extraordinary effort to take top place in the 15m Single Operator Phone category with a score of 1.13M - another new record. The Single Operator 20m and 10m Phone categories were won by Christian Paun VK3MS and Denys Brosnan ZL2AWH respectively.

The winner and only entrant in the SWL Phone category is 15 year old James O'Hare ZL3501 who logged 1326 points - an excellent result considering this is his first contest

Oceania CW Results

John Loftus VK4EMM is the winner of the Oceania Single Operator All Band CW category. He scored 2.33M and receives the Frank Hine VK2QL Memorial Trophy for his superb efforts.

Top place in the Multi-Operator Multi-band CW category goes to ZL6QH who notched up a huge 4.84M (although still less than their record score of 6.86M in 1999).

The Single Operator 40m, 15m and 10m categories were won by Mike Dorman W7DRA/KH6, Eduardo Salcedo DU1ODX and Denys Brosnan ZL2AWH respectively.

Non-Oceania Results

Special congratulations to Ken Keeler N6RO who logged an awesome 24.4K points in the CW Single Operator All Band category - the highest score in North America and worldwide. Several Oceania stations were thrilled to work Ken on 5 bands.

Another significant effort was from Igor Suckov RZ4HF who scored 18.0K to win the top Single Operator All Band Phone category in Europe. Vasily Romanyuk ER4DX was close behind with 17.0K points.

The full 2000 results (including band breakdowns for non-Oceania stations) will be published on the web at www.nzart.org.nz/nzart/update/contests/contests.html

Conditions

Conditions were generally poorer than last year The following comparison of the total number of Phone and CW QSOs logged by Oceania stations shows that the high bands were better on the Phone weekend and the low bands on the CW weekend.

Band	PH QSOs	CW QSOs
160m	14	68
80m	40	266
40m	148	1992
20m	2433	2875
15m	7982	2363
10m	4740	662

Logs

Approximately 50% of the 301 logs received were sent via email. The remainder were paper logs (except for one log on diskette) via snail mail.

All of the logs were checked for the required information and cross-checked against other logs. Approximately 29% had their score adjusted downwards and another 13% were adjusted upwards.

Most of the upward adjustments were related to entrants summing individual band scores rather than multiplying the total points by total multipliers to calculate the final score. Others were due to entrants not counting multipliers correctly, e.g., not realising that each prefix can be counted once on each band. These issues will be clarified in the rules for the 2001 contest.

Participation and The Future

The following table shows the number of logs received from each continent for the 2000 contest

Continent	PH logs	CW logs
Oceania	28	15
Asia	46	52
Europe	72	64
North America	10	10
South America	2	2
Total	158	143

Overall participation from Oceania stations has been trending downwards for some time. A recent analysis by VK6NE shows that we have moved from around 100 Oceania entrants in the early 70s to less than half that number in 2000. The contest is in danger of dying if we do not reverse this trend.

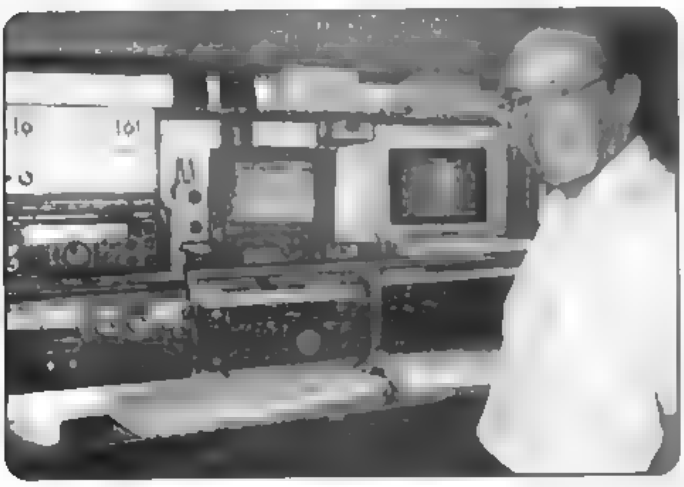
There are a range of issues that need to be addressed to improve the participation and give the contest a new start Here is a brief summary

- More publicity. Create a web page dedicated to promoting the contest. Ensure that the full rules and results are published well in advance of the contest - on the web and in local and oversees journals. We are also sending a copy of the 2000 results to each of the entrants and encouraging them to participate again in 2001.
- More trophies and awards. The Ron Wills ZL2TT trophy is a welcome addition but additional awards like this are required for the various categories within and outside Oceania.
- Start the contest earlier on Saturday. The current start time is 10:00 UTC on Saturday which means that ZL

stations do not finish until 11:00 pm local DST on Sunday - which really is too late for those who have to work on Monday

- Change the focus from VK/ZL to ALL of Oceania. The change of the contest name from "VK/ZL & Oceania" to "Oceania" in 2000 is a step in that direction. The idea is to encourage more of the rarer Pacific DX stations to become involved in the contest. The increased participation from Indonesia this year (4 Phone entries) is a good start.
- Promote contacts on the 160m Band. This band was removed from the contest some years ago but was reinstated in 2000 The idea is to encourage participation by 160m enthusiasts as well as adding another dimension to the contest strategy for all-band entrants.
- Promote contacts between Oceania stations in the same country. Intra-country contacts were reinstated for the 2000 contest These contacts are essential if we are to encourage activity on the 160m and 80m bands where it is often difficult to work overseas DX
- Availability of logging software. We have to make the logging and score calculation tasks as easy as possible for the punters - and the Contest Manager!. The objective is to build the Oceania rules and scoring into all of the major contest logging programs.
- New management structure. The contest is currently managed alternately by VK and ZL each year. This is producing a lack of consistency in the rules, log checking, and publicity. NZART and WIA have recently agreed to form a joint management committee to address this issue and focus on the future development of the contest.

An email discussion group for the contest has been set up at oceaniadxtest@yahoogroups.com. Anyone who is interested in the contest is welcome to join the group - just send a blank email to oceaniadxtest-subscribe@yahoogroups.com.



John Loftus VK4EMM, winner of the Frank Hine VK2QL Memorial Trophy and Oceania CW SOAB category, is ready for operation from his custom built trailer - affectionately known as "ComPort1". The two main radios are an FT1000MP and TS850. John's antenna farm includes three rotatable yagi beams on armstrong poles for 20m to 10m and multi-element wire arrays on the lower bands.

Phone Soapbox

'Had a nice rate on 15m to EU - I think that was my best hourly rate ever.' - AX3TZ

'Condx were excellent at the beginning but not so good later in Sunday - low bands were universally bad!' - VK5GN

'Great fun - huge pileups late sat night - having a hundred Europe stations calling me at once was a real blast'' - VK1JDX

'I am in my 88th year Plenty of DX so was disappointed to lose my voice for the weekend!' - VK4PJ

'This was my 520th contest - condx were not as good as last year. California QSO party and Japan contests also made it more difficult.' - VK2APK

'Great fun - my 1st Oceania contest!' - VK3MS

'Our first ever contest - we had a ball - thanks to contest manager for all the help and support' - ZL3DXC

'Did not know that ZL-ZL QSOs were OK until Sunday pm - keep it that way!' - ZL3TX

'Best propagation was 700 UTC with stations in ZL, VK, YC, 3D2 all 59+20! This is the first time the club has participated in this contest - we are glad to take part. CU next year.' - LU4DRC

CW Soapbox

'Biggest problem was not aurora but lack of activity from Pacific' - LY2OX

'Met a lot of old friends from the last 40 years - it was a very fine contest' - HB9IK

'Your contest is an enjoyable event and could be more so with increased promotion ..... ' - N6RO

'Poor condx to EU on 15m and 10m - 40m was best point earner. Pleased to work N6RO on 5 bands! -VK4EMM

'Can hardly wait until next year to do it again!" - W7DRA/KH6

'Poor condx - only 50% of last year's score' - ZL2AZ

'TNX for the coolest test, sorry about poor condx between JA and OC' - 7K2PBB

'So many JA's, including me, cannot enjoy this contest as it is now at the same time as the Zenshi-Zengun domestic JA contest' - JA9SCB

'Nice to participate again this year. Hope to receive certificate - still admire my first one from over 30 yrs ago as SWL!' - PA0MIR

'Activity in the contest always seems horrendously low from here. Very few OC stations to be worked' - N7DR

2001 Contest

The 2001 Oceania DX contest will be held on 6/7 October (Phone) and 13/14 October (CW). This will mark 66 years since the contest first started in 1935. Lets have a big turn out in 2001 for Oceania's longest running and premier DX contest!

Thank You!

Finally thank you to all the participants who made the 2000 contest a reality and a special thanks to the team from the Wellington Amateur Radio Club (ZL2AOV, ZL2BSJ, ZL1AXG, ZL2BSW, ZL2AMI and ZL2AOH) who sacrificed many summer evenings to help with the log checking process.

Brian Miller ZL1AZE
2000 Oceania DX Contest Manager

2000 Oceania DX Contest: Phone Results

Oceania

Call Sign	Categ	160m QSO	160m Mult	80m QSO	80m Mult	40m QSO	40m Mult	20m QSO	20m Mult	15m QSO	15m Mult	10m QSO	10m Mult	Total QSO	Total Points	Total Mult	Total Score
Australia																	
VK4WIL *	MOAB	0	0	0	0	5	5	99	84	760	339	675	268	1539	3669	696	2553624
VK5GN + # *	SOAB	0	0	0	0	6	6	375	211	632	292	774	341	1787	3991	850	3392350
VK4EMM	SOAB	6	4	4	3	13	11	180	126	463	245	559	258	1225	3008	647	1946176
AX2FHN	SOAB	0	0	0	0	0	0	81	70	468	218	518	220	1067	2571	508	1306068
VK4UC	SOAB	2	2	2	2	8	8	56	49	151	96	328	212	547	1442	369	532098
VK4ADC	SOAB	0	0	0	0	2	2	211	150	251	155	136	96	600	1131	403	455793
AX3TZ	SOAB	1	1	6	5	1	1	163	120	234	140	78	65	483	950	332	315400
VK1JDX	SOAB	0	0	0	0	0	0	100	95	152	143	2	2	254	410	240	98400
VK2CA	SOAB	0	0	2	2	0	0	9	5	86	69	3	2	100	210	78	16380
VK7JAB	SOAB	0	0	7	5	2	2	26	25	24	21	4	4	63	166	57	9462
VK3ER	SOAB	0	0	0	0	0	0	15	13	20	15	0	0	35	55	28	1540
VK4PJ	SOAB	0	0	0	0	0	0	18	17	2	2	0	0	20	22	19	418
VK7LUV	SOAB	0	0	0	0	0	0	0	0	13	11	1	1	14	29	12	348
VK3KTO	SOAB	0	0	0	0	0	0	7	7	2	2	3	3	12	20	12	240
VK5AM # *	SOSB/15	0	0	0	0	0	0	0	0	1341	489	0	0	1341	2682	489	1311498
VK2APK	SOSB/15	0	0	0	0	0	0	0	0	661	297	0	0	661	1322	297	392634
VK3MS # *	SOSB/20	0	0	0	0	0	0	32	30	0	0	0	0	32	32	30	960
Indonesia																	
YB8BHC *	SOAB	0	0	0	0	4	4	70	62	351	213	0	0	425	792	279	220968
YC3IZK	SOAB	0	0	0	0	0	0	0	0	7	7	11	5	18	47	12	564
YB0LBK *	SOSB/15	0	0	0	0	0	0	0	0	354	244	0	0	354	708	244	172752
YC6LAY	SOSB/15	0	0	0	0	0	0	0	0	142	96	0	0	142	284	96	27264
New Zealand																	
ZL6QH # *	MOAB	5	3	11	9	36	23	684	343	737	322	481	236	1954	3991	936	3736576
ZL3DXC	MOAB	0	0	7	6	67	54	233	139	270	145	774	333	1351	3500	677	2369500
ZL3TX *	SOAB	0	0	1	1	2	2	29	22	22	14	1	1	55	96	40	3840
ZL2AWH # *	SOSB/10	0	0	0	0	0	0	0	0	0	0	258	133	258	774	133	102942
ZL3501 # *	SWL	0	0	0	0	2	2	16	16	2	2	7	6	27	51	26	1326
Northern Marianas																	
KH0M *	SOAB	0	0	0	0	0	0	29	24	656	300	43	37	728	1470	361	530670
Phillipines																	
4D68LER *	SOAB	0	0	0	0	0	0	0	0	181	92	84	55	265	614	147	90258

ASIA

India

VU3DJQ *	SOSB/20	[illegible]

Israel

4Z5CP *	SOSB/15	60

Japan

JH4CPC *	SOAB	4524
JH2WHS	SOAB	1239
JA4AQR	SOAB	1098
JA1BBA	SOAB	864
JA2GHP	SOAB	799
JH1UUT	SOAB	731
JG2REJ	SOAB	468
JG4OOU	SOAB	440
JL3RDC	SOAB	360
JA3YPL	SOAB	300
JF3BFS # *	SOSB/10	1530
JR2TRC	SOSB/10	798
JA4ETH	SOSB/10	702
JA6EFT	SOSB/10	405
JA6UBK	SOSB/10	351
JA7BEW	SOSB/10	351
JA1AAT	SOSB/10	189
JE2SOY	SOSB/10	126
7K2PBB	SOSB/10	3
JF2FIU	SOSB/10	3
JK2VOC	SOSB/10	3
JR9NVB # *	SOSB/15	2184
JA4JJI	SOSB/15	570
JR7LVK	SOSB/15	560
JK1BII	SOSB/15	476
JA1ALX/9	SOSB/15	160
JA9SCB	SOSB/15	98
JI8GZS	SOSB/15	72
JA1KK	SOSB/15	18
JA1STY	SOSB/15	18
JG1GCO	SOSB/15	8
JN1YUU	SOSB/15	8
7L4IOU # *	SOSB/20	1400
JA5-3278 # *	SWL	4387
JA2-3803	SWL	84

Kirghizstan

EX2A *	SOSB/15	126

Russia

UA0IBB # *	SOAB	4662
UA0LCZ	SOAB	2726
RA0JJ	SOAB	1007
RN9XA	SOAB	560
RA9ST	SOAB	525
RU0SU *	SOSB/10	576
RZ9IB *	SOSB/15	[illegible]
UA0-107-181 *	SWL	3161

EUROPE

Belarus		
EU1SA *	SOAB	1575
Belgium		
ON4CAS *	SOSB/15	782
Bulgaria		
LZ1LZ *	SOAB	3298
LZ1HB	SOAB	1173
LZ3YY	SOAB	312
LZ2RF # *	SOSB/20	165
LZ1DM	SOSB/20	16
Croatia		
9A4KA # *	SOSB/10	27
9A2GA	SOSB/10	6
Czech Republic		
OK1VSL *	SOAB	8304
OK2BCJ	SOAB	1050
OK1DOL	SOAB	510
OK1ZSV	SOAB	135
OK2SAT *	SOSB/15	972
England		
G3GLL *	SOAB	1898
RS178500 # *	SWL	2541
Finland		
OH6IU *	SOAB	4080
OH2LYP	SOAB	360
OH8JSZ *	SOSB/15	286
OH2HMB	SOSB/15	32
Germany		
DL1TC *	SOAB	231
DL6UAA *	SOSB/15	1064
Hungary		
HA8IH *	SOAB	2871
HA5FA *	SOSB/15	504
Italy		
I2MME # *	MOSB/20	1100
IK6SNQ *	SOAB	6192
IZ4DJZ	SOAB	324
IC8JAH	SOAB	0
IK5WGK *	SOSB/10	12
Latvia		
YL2LY *	SOSB/15	18
Lithuania		
LY1DR *	SOAB	1943
LY2OX	SOAB	1508
LY2LA *	SOSB/15	432
Moldova		
ER4DX *	SOAB	17095
Netherlands		
PA0MIR *	SOSB/15	640
Poland		
SP4GFG *	SOAB	2728
SQ9AOR *	SOSB/15	736
3Z6V *	SOSB/20	30
SP4AAZ	SOSB/20	1
Romania		
YO2BEH *	SOAB	3162
YO4ATW *	SOSB/20	72
Russia		
RZ4HF # *	SOAB	18090
UA1ANA	SOAB	13860
RN4LP	SOAB	10974
UA4LU	SOAB	3325
UA6LP	SOAB	220
UA3LHL	SOAB	209
RN3RQ # *	SOSB/15	1386
UA4RC	SOSB/15	850
RW3VZ	SOSB/15	240
UA3-170-847*	SWL	893
Slovakia		
OM4JD *	SOAB	2912
OM4KK *	SOSB/15	532
OM3YCZ *	SOSB/20	88
Spain		
EA5GPP *	SOAB	1620
EA4YK	SOAB	840
Sweden		
SM5CSS *	SOAB	2520
SM7ATL	SOAB	900
SM7BJW	SOAB	816
8S0W	SOAB	84
SM3EAE *	SOSB/15	48
SM3-8055 *	SWL	481
Ukraine		
UR2E # *	MOAB	1612
UZ7U *	SOAB	3404
UU4JO	SOAB	704
UW7I	SOAB	152
UT3QT *	SOSB/15	1026
UR6MX	SOSB/15	936
UT7MD *	SOSB/20	48
UT1ZZ *	SWL	680
UU-J-1	SWL	84
Yugoslavia		
YU7SF *	SOSB/10	12

NORTH AMERICA

Canada		
VA3IX *	SOAB	48
USA		
K3ZO # *	SOAB	5134
KG9N	SOAB	588
WB4SQ	SOAB	77
W3NC # *	SOSB/10	663
N7DR	SOSB/10	462
W7/JR1NKN	SOSB/10	216
N4MM	SOSB/10	144
W8KNO	SOSB/10	24
WB0IWG	SOSB/10	18

South America

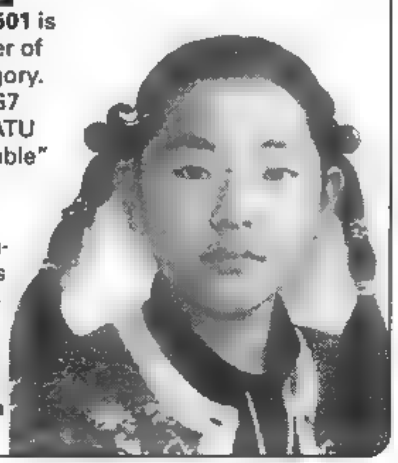
Argentina		
LU4DRC # *	MOSB/15	810
LW7EGO # *	SOSB/10	12

+ ZL2TT Memorial Trophy
# Continent Leader Certificate
* Country leader Certificate
MOAB = Multi Operator All Band
SOAB = Single Operator All Band
MOSB/XX = Multi Op Single Band XX
SOSB/XX = Single Op Single Band XX
SWL = Shortwave Listener

Youth excels in Oceania Contest

Left: **James O'Hare ZL3501** is 15 years old and winner of the Oceania SWL category. He used a Yaesu FRG7 receiver, home brew ATU and "30m of speaker cable" for the antenna

Right: **Saori Shizu 7M4JVV** was the operator at JN1YUU. Saori is 12 years old and probably the youngest entrant in the contest She used an Icom 706 radio running 10W to a dipole.



2000 Oceania DX Contest: CW Results

Oceania

Call Sign	Categ	160m QSO	160m Mult	80m QSO	80m Mult	40m QSO	40m Mult	20m QSO	20m Mult	15m QSO	15m Mult	10m QSO	10m Mult	Total QSO	Total Points	Total Mult	Total Score
Australia																	
VK4EMM+#*	SOAB	7	4	10	10	328	162	507	256	255	168	164	90	1271	3389	690	2338410
VK2APK	SOAB	7	4	22	16	297	184	434	236	195	126	67	49	1022	2870	615	1765050
VK2AYD	SOAB	5	3	58	47	247	143	426	221	134	84	31	23	901	2702	521	1407742
VK4UC	SOAB	10	6	10	10	147	101	103	83	112	90	125	83	507	1737	373	647901
VK2PS	SOAB	6	6	7	7	0	0	62	49	326	102	23	20	424	973	184	179032
AX3TZ	SOAB	1	1	42	32	72	45	37	31	4	4	0	0	156	845	113	95485
VK5GN	SOAB	2	1	0	0	0	0	70	54	141	85	41	29	254	515	169	87035
VK6HQ	SOAB	0	0	0	0	52	28	167	110	10	9	0	0	229	447	147	65709
Hawaii																	
KH7L*	SOAB	0	0	0	0	46	41	5	5	28	24	12	11	91	327	81	26487
W7DRA/ KH6 # *	SOSB/40	0	0	0	0	103	61	0	0	0	0	0	0	103	515	61	31415
New Zealand																	
ZL6QH#*	MOAB	24	16	83	56	437	231	559	286	511	256	96	58	1710	5364	903	4843692
ZL2AZ*	SOAB	6	4	29	20	253	150	105	83	43	35	19	15	455	1923	307	590361
ZL1AIH	SOAB	0	0	5	5	10	9	400	214	215	117	27	22	657	1011	367	371037
ZL2AWH#*	SOSB/10	0	0	0	0	0	0	0	0	0	0	57	41	57	171	41	7011
Phillipines																	
DU1ODX # *	SOSB/15	0	0	0	0	0	0	0	0	389	201	0	0	389	778	201	156378

Asia

Israel		
4Z5AX *	SOSB/10	60
Japan		
JA4YPE *	MOAB	1659
JH4CPC *	SOAB	5652
JH1AZO	SOAB	4752
JA1JQY	SOAB	3904
JA2CUS	SOAB	2632
JL7AIA	SOAB	2024
JA7ARW	SOAB	1716
JA1KI	SOAB	1239
JA0ADY	SOAB	1104
JH3JYS	SOAB	1102
JA3AA	SOAB	940
JH6CQY	SOAB	736
9M2JI	SOAB	675
JA0XD	SOAB	630
JA2QVP	SOAB	615
JK2VOC	SOAB	602
JA1HFY	SOAB	496
JA1HHU	SOAB	495
JA3YPL	SOAB	494
JA1BBA	SOAB	450
JE3UHV	SOAB	147
JF7GDF	SOAB	144
JH5OXF	SOAB	126
JA5IDV	SOAB	112
JF2FIU	SOAB	55
JH1NXU	SOAB	14
JE2SOY # *	SOSB/10	75
JA6UBK	SOSB/10	72
JA1AAT	SOSB/10	48
JR2TRC	SOSB/10	48
JA4AQR # *	SOSB/15	140
JK1LUY # *	SOSB/20	77
JH1PXY	SOSB/20	36
JA3HBF # *	SOSB/40	405
JA2FSM	SOSB/40	210
7M4KSC	SOSB/40	20
JE1KDM/1	SOSB/40	5
JA5-3278 *	SWL	4625
JA2-3803	SWL	935
JA1-42366	SWL	64
Kirghizstan		
EX2X *	SOAB	532
EX2A *	SOSB/15	108
Russia		
RW9C # *	MOAB	1968
UA0LCZ # *	SOAB	6764
UA0LS	SOAB	3503
RZ90U	SOAB	2834
RX9FB	SOAB	385
RA9ST	SOAB	40
RW9TA *	SOSB/20	36
UA0-107-181#*	SWL	4814
Taiwan		
BV7FF *	SOAB	144

Europe

Belarus		
EU1SA *	SOAB	248
EW6AL *	SOSB/40	175
Bosnia-Herzegovina		
T92M *	SOSB/20	35
Bulgaria		
LZ1LZ *	SOAB	704
LZ1XL	SOAB	167
LZ3YY	SOAB	98
LZ3AB *	SOSB/20	1
LZ2RF *	SOSB/40	600
Croatia		
9A3SM *	SOSB/20	35
Czech Republic		
OK2HZ *	SOAB	248
OK2BHE	SOAB	70
OK2ZJ	SOAB	45
OK2EQ *	SOSB/40	105
OKL-329 *	SWL	256
Denmark		
OZ5DX *	SOAB	1824
OZ7BQ *	SOSB/20	6
England		
G3GLL *	SOAB	637
G3JJZ	SOAB	175
Finland		
OH2LYP *	SOAB	220
OH2HMB *	SOSB/15	12
Germany		
DK3KD *	SOAB	372
DJ2IA	SOAB	276
Hungary		
HA5FA *	SOAB	476
Latvia		
YL2LY *	SOAB	2225
YL3IZ *	SOSB/20	20

Lithuania

LY1DR *	SOAB	1232
LY2VAD	SOAB	770
LY2OX	SOAB	560
LY3BA	SOAB	84

Moldova

ER1CW *	SOAB	126

Norway

LA9HFA *	SOSB/20	6

Poland

SP9KRT # *	MOAB	637
SP2BMX *	SOAB	1300
SP5CJQ	SOAB	1134
SP8BAB *	SOSB/20	28
SP5CGN	SOSB/20	2

Romania

YO2BEH *	SOAB	455
YO3APJ	SOAB	198
YO9FJW *	SOSB/15	30
YO4ATW *	SOSB/20	54

Russia

RA1ACJ # *	SOAB	5814
RZ4HF	SOAB	4624
UA3TU	SOAB	2678
RW0IZ	SOAB	1955
UA4LU	SOAB	1235
RA3UT	SOAB	1064
UA3-155-28 # *		SWL 300
UA3-170-847	SWL	105
UA3-155-75	SWL	75

Slovakia

OM5NL *	SOAB	200
OM7RC	SOAB	84

Slovenia

S59ZZ # *	SOSB/15	48

Spain

EA5GPP *	SOAB	330

Sweden

SM7BJW *	SOAB	119

Switzerland

HB9IK *	SOAB	1121
HB9CBR	SOAB	40

The Netherlands

PA5GU *	SOAB	120
PA0RRS *	SOSB/20	4

Ukraine

UR2E *	MOAB	210
UZ7U *	SOAB	1054
UT3QT	SOAB	170
UW7I # *	SOSB/20	70
UR5QU # *	SOSB/40	700

Yugoslavia

YU7SF # *	SOSB/10	3

North America

Panama

HP1AC *	SOAB	105

USA

N6RO # *	SOAB	24420
K3ZO	SOAB	6549
N6ZZ	SOAB	4896
WO6M	SOAB	2208
N7DR	SOAB	1273
N4MM	SOAB	84
K4IU	SOAB	40
W7/JR1NKN#*	SOSB/10	231
K0COP # *	SOSB/40	10

South America

Argentina

LU1EWL # *	SOAB	162

Uruguay

CX9AU *	SOAB	16

+ VK2QL Memorial Trophy

Continent Leader Certificate
* Country leader Certificate
MOAB = Multi Operator All Band
SOAB = Single Operator All Band
MOSB/XX = Multi Op Single Band XX
SOSB/XX = Single Op Single Band XX
SWL = Shortwave Listener

Station Operators for PHONE Multi-Op Entries

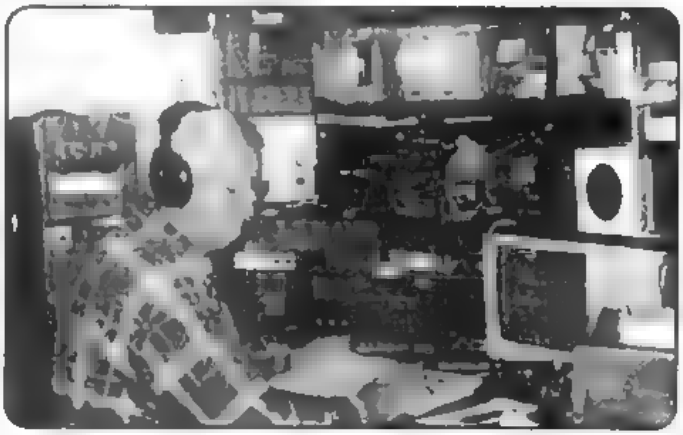
Call Sign	Operators
I2MME	I2MME, I2RTF, I2CZQ
LU4DRC	LW1DTZ, LW6DKO, LU3EUO
RS178500	BRS32525, RS177448
UR2E	USE-073, US8ET
VK4WIL	VK4DZ, VK4CEJ, VK4FJ, VK4SN
ZL3DXC	ZL3NZ, ZL3GA
ZL6QH	ZL1AZE, ZL2AOV, ZL2AMI, ZL1AXG, ZL2CA, ZL2BSJ

Station Operators for CW Multi-Op Entries

Call Sign	Operators
JA4YPE	JF3EBO
RW9C	UA9CGA, RW9CF
SP9KRT	SP9ADU, SP9EMI, SP9-1753
UR2E	USE-073, UR5EFJ
ZL6QH	ZL1AZE, ZL2AOH, ZL2BSJ

Check Logs gratefully received from
3Z3CUG, DL1JMS, DL2AWW, DL3ZAI, DL5ST, DL8WAZ, DU1/DK3GI, EA1CBX, OK2BNC, RN3AY, RX3DTN, SM0LZT, SP2FWC, SP4IGV, SP5GMJ, SP6IEQ, UA9ZBN, ZL1TM

Ken Keeler N6RO, grows stacks of yagis "out of his head"! Ken posted the top score outside Oceania in the CW SOAB category. He uses FT1000MP radios and a huge antenna farm consisting of beverages, 4 square wire arrays for 160m to 40m, a 2el quad for 80m, a 4/4 el yagi stack at 135ft/65ft for 40m, a 5/5/5 el yagi stack at 135ft/90ft/45ft for 20m, a 6/6 el yagi stack at 135ft/95ft for 15m and a 5/5/6 el yagi stack at 100ft/66ft/33ft for 10m.



Martin Luther VK5GN, winner of the Ron Wills ZL2TT trophy and Oceania Phone SOAB category. He uses two Icom 765 radios and an impressive antenna farm consisting of beverages, an 80ft vertical for 160m, a quarter wave vertical for 80m, sloping dipoles with reflector wires on 40m, a 9 el log periodic at 60ft for 20m to 10m, a 4 el yagi at 70ft for 15m and a 6 el yagi at 70ft for 10m.

Ross Hull Contest 2000 - 2001

There were some surprises in the 2000 - 2001 Ross Hull Contest. The main one is that 6 metres delivered the goods again and decided the outcome of the contest. Probably not a surprise, really, considering that the last 6 metre scoring bonanza was 11 years ago.

The outcome is that the trophy has moved north to **Glenn, VK4TZL**. Second place goes to **Gordon, VK2ZAB**, and third to **Ross, VK2DVZ** In the two day section, the prize goes to **Neville, VK2QF**, closely followed by **Ross, VK2DVZ**. Congratulations to these top scorers, and to all others who sent in logs.

There were two logs of special interest. One was from **Yutaka, JH1WHS**, who is well known to Australian 6 metre operators and currently holds an Australian Digital Modes record for 6 metres.

The other unexpected log came from **Bert, ZS6HS**, who has been a licensed amateur since 1935 He first came on the air with equipment built from a QST article by Ross Hull, so he thought it would be appropriate to submit a log in honour of the man who effectively gave him his start in amateur radio.

As usual, thanks to all those who sent in logs, and I hope you will be back again next time.

Ross Hull Contest 2000 - 2001: Results

Call	Name	6 m	2 m	70 cm	23 cm	12 cm	6 cm	3 cm	TOTAL
Section A: Best 7 Days									
VK4TZL	G. McNeil	**3986**	876	110	-	-	-	-	**4972**
VK2ZAB	G. McDonald	18	**1539**	**1655**	**712**	-	-	-	3924
VK2DVZ	R. Barlin	-	1485	1450	600	-	-	-	3535
VK3BJM	B. Miller	7	426	350	80	**30**	**80**	**130**	1103
VK4KZR	R. Preston	-	543	340	200	-	-	-	1083
VK3AFW	R. Cook	9	603	320	-	-	-	-	932
VK2TG	R. Demkiw	36	402	385	-	-	-	-	823
VK3CY	D. Clarke	-	306	225	-	-	-	-	531
VK3KAI	P. Freeman	-	225	205	64	-	20	-	514
VK3GK	L. Moyle	11	177	175	144	-	-	-	507
JH1WHS	Y. Katoh	400	-	-	-	-	-	-	400
VK3AUI	G. Sones	19	66	150	48	-	-	-	283
VK5FD	A. Dunn	21	12	10	-	-	-	-	34
Section B: Best 2 Days									
VK2QF	N. Mattick	**1401**	-	-	-	-	-	-	**1401**
VK2DVZ	R. Barlin	-	**528**	**560**	**232**	-	-	-	1320
VK3AFW	R. Cook	8	267	180	-	-	-	-	455
VK3CY	D. Clarke	-	252	180	-	-	-	-	432
VK4KZR	R. Preston	-	188	160	80	-	-	-	428
VK3GK	L. Moyle	11	150	145	104	-	-	-	410
VK3KAI	P. Freeman	-	165	165	64	-	-	-	394
VK3AUI	G. Sones	9	66	150	48	-	-	-	273
VK2TG	R. Demkiw	27	99	135	-	-	-	-	261
ZS6HS	B. Howes	3	9	15	8	-	-	-	35
VK5FD	A. Dunn	7	9	5	-	-	-	-	21

Jack Files Contest 7th July 2001

The Wireless Institute of Australia ,Queensland Division announces the Jack Files Sunshine State Contest. This is to offer a practice run for the Rememberance Day Contest and also in memory of Jack Files a long serving Queensland WIA member. It is open to anyone and overseas amateurs are most welcome to try a hand. Worked all Queensland awards for contact with more than ten shires of Queensland are available with the inclusion of 5 IRCs with the log, for stations outside VK and ZL All qualifying VK and ZL logs received will be sent the WAQ award regardless of position in the contest.

Date :7th July 2001 6·00pm AEST 8:00 UTC to 07.59hrs UTC 8th July 2001

Duration 24 hours

Categories: (1) Full Class, (2) Novice Thats it!

Modes: Anything

Cypher: Signal report plus operators age Ladies use 00 eg 5900 or 59900 Gents use 59 + in my case 41. Queenslanders will also notify you of their shire or city which is the multiplier.

Bands: 160~10m No Warc

Multipliers: Queensland Shires only, count once for each band viz:Toowoomba on 160 through ten would be 6 multipliers.

Points per QSO: One (1) regardless of band or mode

Duplicates: Only one contact per band with another station regardless of mode

Contacts: Once only per band (forces multiband operation)

WAQ Contest Award for more than 10 Queensland Shires 5 on 80 and 5 on 40 counts as ten!

Any contact is valid but must be with Queensland for multipliers. DX to DX is OK but log must have at least one VK4 contact to be a valid log!

Scoring Example: Total contacts on all bands say 40, multiplied by total VK4 shires one per band say 40 X 6 = 240

Logs to Jack Files Contest, PO Box 199 Waverly Heights,QLD. 4012. By 6th August 2001

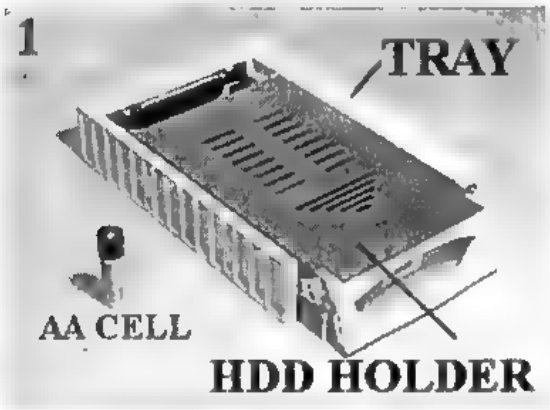
Trent VK4TI
ar

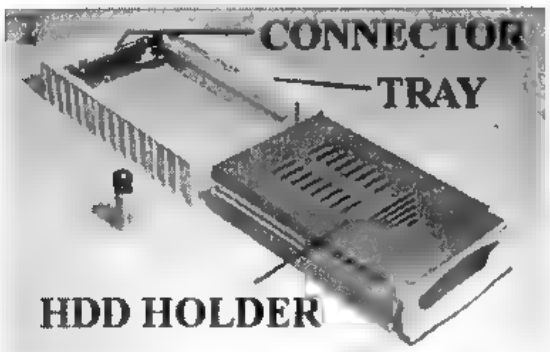
Repeater Link

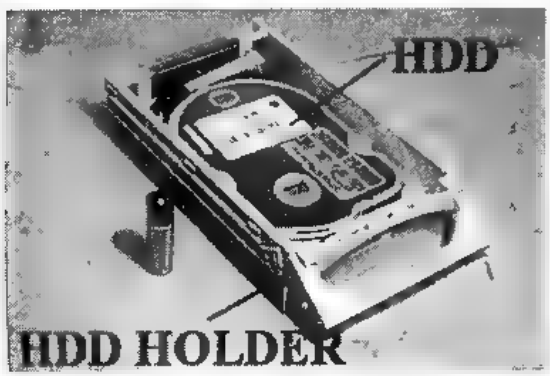
Will McGinn VK6UU
21 Waterloo Cr Lesmurdie 6076 will2@iinet.net.au VK6UU@VK6BBR

Power Supply

As previously reported, the 13.8 volt mains power supply running the International HF Beacon, VK6RBP, has been a source of problems. The output voltage of the power supply drops to a low value under load some of the time, with the output amp meter reading 30 amps. Suspicion was that RF from the beacon was getting into the power supply and causing the erratic behavior. The power supply was removed from site and had extensive RF filtering fitted, including toroids and capacitors on the mains input and 13 volt output. Tests, including the pulse type of operation, indicated all was well, but there was no easy way to simulate the possible RF problem. However when re-installed, the power supply behaved as before. Just in case this was the outcome, I took my power supply, the same make and model as the HF Beacon's and installed it. Problem solved. The Beacon's original supply will reside in my shack and hopefully the beacon will behave.







HDD

Many of us rely on computers for all sorts of applications and what we dread most is a hard disk crash, or problems with software that just can't be resolved. Often it is easier to reload the complete hard drive rather than be frustrated by a particular problem. However this is easier said than done. Re-formatting a hard drive and reloading the operating system, along with all the software and sorting out the drivers for printers etc can take up a lot of time. This down time can put the computer out of action for a long time.

Even upgrading the operating system can be a real pain, if only there was a way to keep the computer as is, while you rebuild the hard drive. There is one way and that is to buy another hard drive and swap between them, while you build up the new hard drive. Still this requires taking off the covers of the computer and swapping plugs between the hard drives. There is another way that is easy and fun to do, and that is to install a removable hard drive frame that allows hard drives to be plugged in and out from the front of the computer.

After much thinking about the problem, I decided to buy one of these hard drive trays and install it. Firstly my computer has two hard drives, C and D. C contains the operating system along with all my programs. The D drive is only for saving data, such as text, pictures and the like. I do an original save on the C drive and then a back up on the D drive. This setup made the swapping of C drives easier.

These removable hard drive trays fit in a spare bay on the front of the computer, the same as where your CD ROM drive fits. Hopefully you have one spare. The removable hard drive trays come in two parts. The first part screws into a spare bay and the IDE cable and power supply lead, that normally goes to your hard drive, plug in the back of this tray. The second part is to hold your hard drive, which is screwed into place and a IDE lead and power supply cable, that is part of this holder, plug into the hard drive.

With your hard drive now secured into the holder, this holder then slides into the frame fitted into a spare bay. At the back of the holder is a multi pin connector that makes the IDE and power connection, which connects to a socket at the rear of the frame. Difficult to describe but simple in principle.

Once installed, any number of hard drives can be fitted into a holder and then slipped into the frame mounted into the computer. You now have a simple way to swap hard drives from the front of your computer. The computer has to be shut down between swaps of course, but it is now easy to maintain your existing computer hard drive, while you load a latter version operating system, along with all your software onto a new hard drive. At your leisure you can re-build a hard drive, yet still have your original computer setup while you do so.

Having a D drive makes it even easier as any software or data you want saved for both C hard drives can be accessed from either C drive. It is important to repeat my setup has the second drive as is, a D drive. This drive remains in the computer and is not fitted into a

removable tray. It could be, but for the moment it is not.

So what you end up with is an easily swapped C drive. I have Windows 95 on my original C drive and Windows 98 on the new C drive Once I'm happy with the new drive, I can reformat the 95 drive and upgrade it to 98 along with all the software. As long as the two drives are setup the same, any serious crash with one of them can be laughed at by replacing it with its mirror image.

Cost is about $20 for the tray and hard drive holder, they come as one. The units available now come standard with a small fan to remove heat from the hard drive as it is enclosed inside its holder.

Of course there is the cost of another hard disk drive. I bought a 20 GHz new one for under $200. Cheap considering the frustration of having a hard disk crash.

Included are three photographs of the tray and holder. Photo 1 shows the HDD holder almost all the way inside the tray. Photo 2, the HDD holder removed from the tray and photo 3, the holder with its cover removed to show the hard disk drive. The AA cell is for size comparison.

Provided your computer supports auto HDD detection in its BIOS, the swap over is simple. One slight silly problem I had was that upon installation and turning the computer on, I received a failure message "HDD failure". The tray comes with a key on the front and I had not turned it to the lock position. This not only locks in the HDD but also applies power to the hard disk. No power no work, hence the failure message. Sure increased the Heart rate for a while.

Hope the explanation and photographs are sufficient, as this really is a great way to go. I now have the second hard drive completely set up with Internet and all my programs. I also now have Windows 98, which is better than 95 in a number of areas, in particular USB support. Never tried the USB ports before as Windows 95 reported them as not functioning. Windows 98 set them up and I celebrated with a new printer plugged in and working on the USB port.

Still, as we all know Windows is still Windows. Clicking on my external modem icon generates a message "you have no modem," yet it lets you talk to the modem and dial my ISP along with normal Internet use. Not bad for a modem that is there.

AR

Over to You

Support for WIA Contests

I had a chuckle over DJ7YE's long diatribe in May's OTY about contests. I think his main point was that he didn't like them!

While Bernd's comments are not all without validity, he displays a gross ignorance of the subject that he seeks to criticise. Before writing to an Australian magazine, he would have done well to acquaint himself with the local contesting scene, which attracts far more VK participation than do the international contests.

Bernd and others may wish to consider the following facts about local contests:

- Contests are not 'taking over' amateur radio. Even during our busiest contest (the Remembrance Day), there is still sufficient band space for non-contest activity.
- Local contests are more relaxed than the major DX contests, and many participants do exchange names, locations and even genuine signal reports.
- Contests dramatically increases activity on most bands. In a sparsely populated country such as Australia, this is a major benefit, as we are told to "use 'em or lose 'em".
- Particularly on VHF/UHF, being able to operate portable and be assured of a good number of contacts in a contest is godsend to those living in poor locations or unable to erect effective antennas at home.
- Contests benefit other facets of amateur radio, such as home construction of equipment and antennas, emergency preparedness, and promotion of the hobby. Three months ago, my local club had its field day station pictured in the local paper. This would not have happened had there been no contest. I would not be planning the construction of a new VHF/UHF antenna system if there were no contests in which to use it.
- There is indeed a large number of contests in most countries (including Australia). However most are quite small and coexist happily with other amateur activity. That contests are run means that there is continued interest in them. Long may this continue!
- Contesting is just one of a large number of legitimate amateur radio activities. Many of us, who enjoy contests are also active in many other aspects of amateur radio and WIA activity. Fortunately we are ignoring Bernd's amateur psychology and are happily enjoying amateur radio.

Bernd calls himself a DXer. As many examples of sloppy operating (59 reports, distorted audio, bad phonetics, excessive power, short listening times after calls, etc) we hear from his own continent are as attributable to his fellow 'DXers' as contesters. He would do well to direct his barbs to those responsible for his gripes rather than parading his prejudices about contests in a country where these are demonstrably untrue.

73, Peter Parker VK3YE

WIA members: loyal and bold

Much has been written about preserving the strength of our Institute and ways of increasing membership.

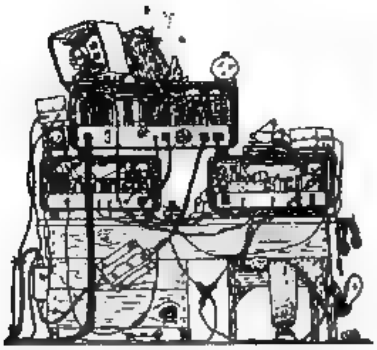
It is obvious that we have to attract members of a younger age lest the W.I.A will die with us. There is no room any longer for old style elitism.

However there is another way of nurturing loyalty to the W.I.A. Let us first reward and acknowledge the loyalty of our existing members by printing their call book entries in bold type.

This will engender pride in membership and encourage (or shame) those who remain outside but partake in membership benefits and use our repeaters.

73, John Hinsch VK5ARL

more letters on page 55 and 56



Ham Shack Computers

Alan Gibbs, VK6PG
223 Crimea Street, NORANDA WA 6062
Email: vk6pg@tpg.com.au

Part 3 – Software

Logging and Control Systems

If you are lucky to own a modern Icom, Kenwood, Yaesu or Ten Tec transceiver or receiver then you are in for a nice surprise. The multi-Windowed image shown on this page highlights a just a few of the attributes of YPlog written by Tony Field, VE6YP (1)

In short, YPlog not only controls your rig, but has a comprehensive logging program that tracks all your contacts, automatically provides beam headings, displays a world map, calculates prefixes and modes used for DXCC lists etc.

It can upload-download memory settings, flag zones, countries, counties, club stations, types of licensees, prints QSL cards; AND acts as an automatic packet radio DX cluster tracker all at the same time. Phew! And there's more as well!

Your computer will need MS Windows 95 or later, at least 32 MB of RAM with three or more communications ports.

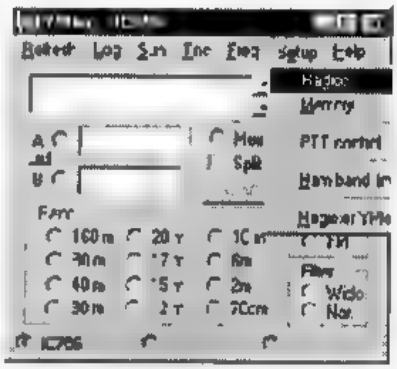
One port for the mouse, the second for a packet radio modem, and the third to send and receive control signals to your radio. In fact, YPlog can control up to THREE radios allowing you to switch between them and operate each radio set all from just one computer screen. The joy of hunting DX on the HF bands and being simultaneously prompted from the DX cluster postings all at the same time is magnificent.

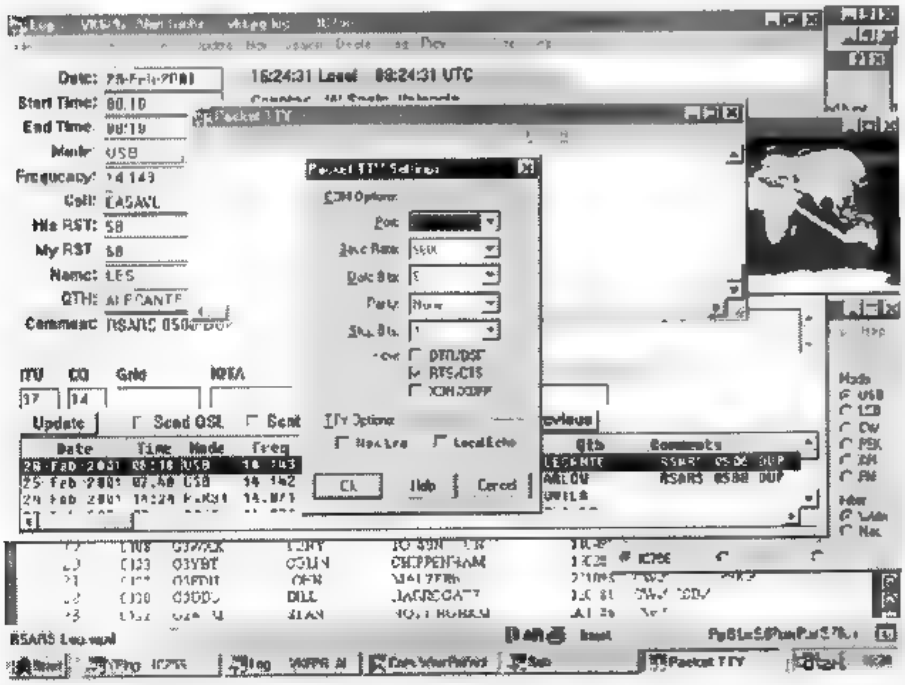
One Example

One "click" on a DX cluster posting, YPlog automatically programs the call in the log, AND sets the frequency and mode ready for you to call the DX station by Morse or SSB. In fact you don't need to have the transceiver in front of you to operate it anymore. Operating this way now demonstrates the total union between AR and the world of computing. Once tried you will never go back to the old ways!

In the picture overleaf, YPlog is running in the background while this article is being written in MS Word™. Careful observers will also see that Coral WordPerfect™ is also in the background acting a database to track award claims.

YPlog is so comprehensive it would take up the contents of a one-inch thick book let alone the contents of just two pages in this magazine. But luck is on your side. The HELP option at the top right hand end of the ribbon reveals all the fine details needed to setup, operate, and maintain the YPlog computer software.



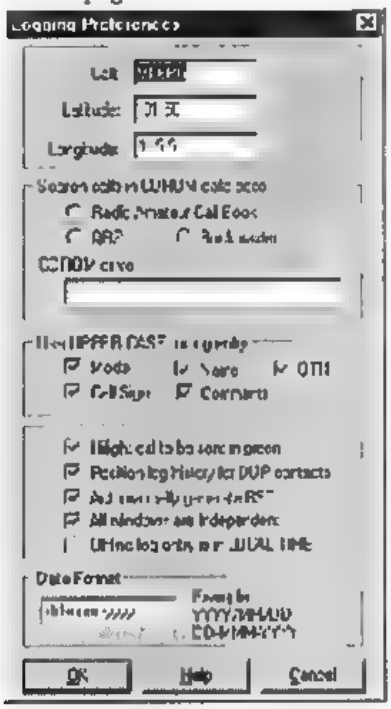


YPlog Setup

YPlog is "self-extracting" prompting a new FOLDER in the directory C:\WINDOWS\PROGRAMS or default **YPlog Logging** folder. By "clicking" NEXT, YPlog installs in seconds placing YPlog into your START, PROGRAMS menu on your computer Next, go to the Windows, START, and PROGRAMS "Click" YPlog to start the program and select Setup then Radios to enter your own data into the program Memory, PTT control, Ham Band Limits and finally your NAME, CALLSIGN and LICENSE NUMBER in the last window 'Click" OK and close the program down Re-open YPlog and select Log to open the log window, then select File, Preferences and Logging Preferences. Enter your own data as shown in the picture.

YPlog needs to know where you are

in the world so you can be found on the map and as a basis to calculate how far it is from your QTH to Timbuktu or wherever! Once done, start remote controlling your rig and have some real fun with Amateur Radio. Additional features are too numerous but, for example, by selecting TNC, your packet radio parameters can be entered at the prompts shown in the centre of the previous page.



YPlog is also a complete contest logging and control program and even supports QRQ CW transmission. With other systems, users must become familiar with a DX log in Windows and then learn a DOS contest log with completely different keyboard usage and look/feel characteristics.

In many cases it is difficult to merge a DOS contest log with a Windows DX log. All this is easy with the YPlog software. In addition, the program includes YPserver allowing several DX stations computer networked information without resorting to software duplication.

All this information might seem overwhelming for the newcomer. Take heart, work SLOWLY through all the prompts until everything works correctly.

TRY before BUY?

YPlog is "shareware" meaning that you can use the program to see if it suits your own needs. Users are prompted to purchase a *User's Licence* from Tony Field, VE6YP by Internet email (1). Of course, you will have to post a cheque for US$50:00 to gain full authorisation. Once the user's licence number is entered – the world will open up to you! For Internet users, VE6YP offers first class online help via email. In addition, registered users are automatically sent updated information regularly, which is more than can be said for most computer program writers!

YPlog has been used successfully for over three years at VK6PG with several upgrades and DXCC updated files to keep everything fresh. Very good value and highly recommended software for proactive AR computer users.

Bonus for PSK Operators

YPlog also "dovetails" with WinPSK and HamScope freeware written by Moe Wheatley, AE4JY. Once a PSK station is entered into WinPSK or HamScope, the data is automatically updated into the YPlog logbook, *and* YPlog picks out duplicate contacts at the same time

Ham Tip No. 3

Computers use complex switch-mode PSU's. If they fail, they can cause considerable damage. Once each year, keep the PSU clean by brushing out grit, grime, cat and doggy hairs with a small paintbrush and a vacuum cleaner. One drip of sewing machine oil in the fan bearings will keep your computer running cool and calm.

Ham Shack Computers, Part 4 looks at **Networking** two computers together. Possibilities include running PSK31/DX cluster from a comfy, remote air-conditioned sitting room instead of a cold (or hot) Ham Shack! XYL permitting.

(1). YPlog and Tony Field, VE6YP at: www.field@nucleus com

ar

Intro To Automatic Packet/Position Reporting System (APRS)

Bob Bruninga, WB4APR, APRS Engineering LLC
LIVE APRS web site at www.aprs.org

APRS is different from regular packet in three ways. First by adding maps and other data displays, second, by doing all communications using a one-to-many protocol so that everyone is updated in real time, and third, by using generic digipeating so that prior knowledge of the network is not required. APRS turns packet radio into a real-time tactical communications and display system for emergencies and public service applications (and global communications). Normal packet radio has only shown usefulness in passing bulk message traffic from point to point. It has been difficult to apply conventional packet to real time events where information has a very short life time.

Although the recent interfaces to the Internet make APRS a global communications system for live real-time traffic, this is not the primary objective. But like all of our other radios, how we use APRS in an emergency of special event is what drives the design of the APRS protocol. Although APRS is used 99% of the time over great distances, the protocol will always be optimised for short distance real-time crisis operations.

APRS provides universal connectivity to all stations by avoiding the complexity and limitations of a connected network. It permits any number of stations to exchange data just like voice users would on a voice net. Any station that has information to contribute simply sends it, and all stations receive it and log it Secondly, APRS recognises that one of the greatest real-time needs at any special event or emergency is the tracking of key assets. Where is the Event Leader? Where are the emergency vehicles? What's the Weather at various points in the County? To answer these questions, APRS is a full featured automatic vehicle location and status reporting system too. It can be used over any 2-way radio system including HAM, CB, Marine Band, and Cellular Phone Now there is even a nation- wide [USA] LIVE APRS tracking network on the Internet!

The user channel for APRS is on 145.175 MHz in Australia but locally the beacons are being distributed via some of the packet BBS user ports to help get users started using their local packet channel. [editor]

AN EXPANDING VHF/UHF WORLD

David K Minchin VK5KK
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E-mail: tecknolt@arcom.com.au Web page: http://members.ozemail.com.au/~tecknolt
All times are in UTC. NOTE NEW FAX NUMBER FOR CONTRIBUTIONS

50 MHz Equinox wrap-up

Ray VK4BLK, Yepoon reports "List of DX worked during April 3D2,CE0,DU,FO,FW,HL,H44,JA,KH2, KH4,KH6,KH8,T30,T88,TI,TG,V31, V63,V73,VK9M,W,XE,YS,ZK,ZL" .. Ray VK4BLK

Mike Vk2FLR reports activity for April 2001, 3/4 1225 VR2XMT 55, 5/4 2315 VE7XFD 319 heard only, 0015 V73SIX/ b 519. 6/4 2303 XE1KK/b 519, 7/4 2140 TG9AJR 58, 2145 ZF1DC 59, 2150 V31RH 59, 2330 YS1RR 53 8/4 2310 V31RH 59, 2317 YS1RR 59, 2328 KH8/ N5OLS 59, 2345 FO3BM 54, 2353 V73JK 57, 9/4 0030 KB6WW 539 plus many W6 heard, but looking for VE, 0052 TI5KD 57, 0110 VK8MS 59+ direct F2, 10/4 0346 JK8VMB 57. 12/4 2215 TI5KD 57, 2229 TI2ALE 55, 2235 TI5BX 55, 2245 HP2CWB 55, 2330 ZL2TPY 55, 2336 3D2AG 59. 13/4 0030 KH6SX 579, 0207 WH6O 59 plus vast VK1,2,3,5,7 pileup, 0456 DS5ISO 569, 0514 JH1WHS 59, 0518 DS5MHD 55, 0520 JA3APL 59, 0523 JE2DWZ 59, 0525 JA7JH 59, 0526 JA1ETO 59, 0527 JF3XWM 59, 0528 JA2WP 59, 0529 JI9EDN 55, 2234 KH8/ N5OLS 569, 2245 VK2BA 52 F2 b/s, 2313 3D2AG/p 559, 29/4 0130 TX0C 57. Could have done with some more!" ... Mike VK2FLR

Meteor Scatter on 50 MHz

Rex VK7MO reports .. "Good results this am (6/5/2001) on 6 metres. Glenn VK4TZL completed QSOs with VK3AXH (1660 km) and VK7MO (2027 km) on fast hell. One burn was readable for 2 minutes, detectable for 5 minutes. I monitored the Doppler shift of this burn on Spectrogram and the Doppler moved 20 Hz in 30 seconds indicating a significant change in the upper winds speed, or a change in the scatterings originating region (possibly different decay rates at different levels) with differing wind speeds in various regions.

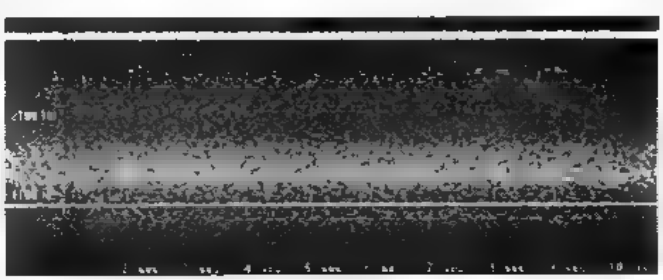
Glenn found no overlap as he copied a number of pings and burns from both VK3AXH and VK7MO, who were transmitting simultaneously. This indicates a narrow beam width of the scattering stations as they are within 10 degrees of each other to Glenn. It fits the view that diffraction due to blocking of the wave front is the mechanism (i.e. the same process provides enhanced signals for aircraft scatter and requires the blocking object to be closely in line). It suggests that with small beams at our power levels the meteor trail must be in line. This will be proportionately more difficult at 2 metres.

Power levels were 100 watts peak, 20 watts average. Antennas, VK7MO 3 element beam, VK3AXH 7 element beam and VK4TZL, I think a 5-element beam. Anyone interested in joining us in Hell please let me know. Listen in between 0645 and 0715 EST on 50.145 each morning." ... Rex VK7MO

World's First 23cm Auroral Contact

What looks likely to be confirmed as the worlds first auroral contact in the 23cm band took place on the 11th of April. Carl Mohlin ["Mo-LEEN"], SM3AKW, had the contact with SM5QA at 1650UTC and exchanged '33A' reports.

Carl said the signal sounded like auroral signals on the lower bands. Both stations transmitted on 1296.200MHz, but a plus-5kHz Doppler shift each way meant signals were received on 1296.205MHz. Both stations were running 500 watts to high-gain antennas. (Courtesy of the RSGB)



Spectral Snapshot of Auroral signal from last month courtesy of John VK3KWA

Portable from Mt Manara

An excerpt from Barry Millers VK3BJM's report on his portable expedition to Mt Manara, from 20/4 to 22/4/2001 at Latitude 32° 28' 34.7", Longitude 143° 56' 5.3"; QF17xm. Barry worked into the Sydney area on Aircraft Scatter "..The strength of the signals was most amazing. After the night of 21/4) where I was squinting into the earpiece to hear Charlie and Ron on CW, and even the initial contact with Gordon at 4x1 on voice, to suddenly hear Gordon at 5x6 was just amazing. Perhaps my isolation heightened this? And Gordon reported that 70cm attained similar levels.

The 2m/70cm highlights of the log (* indicates new Grid for this station): 20/ 4/2001 1100Z VK3AFW 57-58 Mob. Heathcote Elmore, 1109Z VK3CY 57-59 Mob. Elmore, 1135Z VK3CY 55-55 Mob. Echuca, 1145Z VK3AFW 52-52 Mob. Moama, , 1200Z VK3AFW 52-52 Mob. 45km sth of Deniliquin, 1230Z VK3CY 41-51 Mob. 10km sth of Deniliquin, 2130Z VK3KEG 41-51 Mob. 40km nth of Hay (*QF25 - 460km path), 2140Z VK3CY 51-52 Mob. 70km nth of Hay

21/4/2001 from Mt Manara at 1123Z VK3FMD 41-41 (*QF17), 2136Z VK2ZAB 41-31 (*QF17), 2148Z VK2ZAB 41-41, 2230Z VK2ZAB 56-55, 2327Z VK2ZAB 51-52 70cm (*QF17). 22/ 4/2001 0105Z VK2DXE 41-41 Mt Manara (*QF17), 0622Z VK3FMD 41-41 Mob. Deniliquin, 0640Z VK3XPD 41-41 Mob. Mathoura, 0747Z VK3XPD 51-41 Mob. 45km nth of Heathcote, 0817Z VK3XPD 51-51 Mob Heathcote. Thanks to all who came up on 2m or 40m-liaison frequency. I had a fantastic time Can't wait for the next opportunity - hopefully tropo

Microwave Primer Part Thirteen:

Microwave Transverter IF Frequencies, filtering and switching

Last month we discussed IF transceivers for use with microwave transverters. Now to tackle IF frequencies, improvements to audio and transmit/ receive switching.

Not long ago, when 50, 144 & 432 MHz transverters were in vogue, 28 MHz was a popular IF. Some early 1296 MHz converters and transverters also used 28 MHz but most had poor image rejection. I recall early converter difficulties with airport radar from the lower end of 23cm; image rejection was probably non-existent. With the proliferation of 144MHz transceivers, this soon became the IF standard for 23 cm and above transverters. The IC202 /FT290 helped ensure that nearly everything published in European and USA literature for the past 20 years used 144 MHz.

144 MHz is probably the worst IF frequency to use at home or on a mountaintop! As all operation tends to revolve around the calling frequency of 144.1 and etc higher, Microwave Bands are simply superimposed on top of 144.1 MHz. The average 144 MHz transceiver isn't that well shielded, I heard VK3AUU (on 144.1 MHz) while I was working into VK3 on 10 GHz (IC202 IF), 400km's away portable at Robe, SA!!! If you are near 144.1 as a talk back frequency you will also have backwash while working cross band. 3 watts into a transverter goes a fair, far distance .

The easiest solution is to pick a different section of the 144 MHz band. With an IC202 you have little choice but 144 MHz plus or minus a bit! For 1296 MHz I use 95.833 MHz crystal rather than 96.000 MHz. This means 1296 MHz = 146 MHz giving another significant digit (MHz) in the frequency display. For 2403 MHz I use a 94.000 MHz xtal 2403 MHz = 147 MHz. When we had 3456 MHz, I ran this to a 146 MHz IF in a similar manner to 1296 MHz.

Now if your IF rig happens to cover outside of 144 – 148 MHz (as most transceivers built since 1990 do) then think about using 140 – 150 MHz e.g. 2400 =140 MHz, 3400 = 140 MHz and etc. Channel 5A is seldom used in Australia so the spectrum is clean It doesn't matter if the IF is outside our band as long as you carefully shield the IF attenuator! The only problem may be 10368 = 148 as this segment is still hyperactive with paging transmitters

Some would say a better solution is to go higher. I use 430—440 MHz for my portable transverters on 5760, 10368 and 24048 MHz. There is no reason why it can't be used for 2400 & 3400 MHz. With 1296 MHz the third harmonic will manifest itself around the same level as the mixed product on transmit. Using 432 MHz as an IF frees up 144 MHz for talkback or cross band operation. Almost all transceivers (except IC402!) have 430—440 MHz coverage so you can implement transverter conversions like 2400 = 430 MHz and so forth easily.

Another spin off from using 432 MHz as an IF is the reduction in RF selectivity required to remove the image, now 864 MHz away rather than 288 MHz. This is especially significant on 10368 & 24048 MHz. The Japanese use 1200 MHz as an IF for 10,368 MHz (and higher) aided by a far better selection of 1200 MHz transceivers in Japan. Those lucky few with an IC1271/5 or a TS790A may consider this. Using a 1296 MHz transverter is an option but IF frequency (2nd IF now) will need to be selected to avoid the 144.1 MHz problem again.

Now moving to the audio end. In many VHF transceivers IF and AF filtering is not as good as their HF counterparts. In 20 plus year old transceivers, like the IC202, IF and AF gain is often higher than needed (three IF amplifying stages) and produces too much white noise. A common modification is to tap the product detector to the output of the second IF amplifier while leaving the AGC connected to the third. You may have to set the AF gain a bit higher but the transceiver is just as sensitive with lower internal noise.

Transceivers, except perhaps the latest DSP types, improve with AF filtering. Circuits and commercial boxes are available to do this. The battery box in the IC202/FT290 has room to accommodate filters. Or use one of the many Sound Card programs about and run the audio via a PC. OK for home and vehicle but a bit over the top to drag the Laptop out portable!

Most professional communications systems use expanders to improve the signal-to-noise ratio on voice circuits. An expander is AGC driven circuit in reverse. A worthwhile addition to a receiver, with some audio pass band shaping, making weak signal working a little more comfortable It doesn't make signals appear it but enhances readability of marginal signals DSP units do likewise but there is a theoretical limit to what can be gained If you want to play with an Active filter expander have a look at Russell VK3ZQB's article in a recent edition of Radio Communications It does work

Transmit receive switching.

Three methods have evolved The traditional connection of the PTT circuit to Rx/Tx switching of the transverter via an external PTT connection For those transceivers with no external switching you could either modify them or use RF sensing to switch over the transverter, as most Solid State Amplifiers do

RF sensing is OK if you use FM but a chattering microwave relay on SSB switching expensive devices is enough to scare anyone! A better and perhaps safer solution than a separate PTT connection is to switch the transverter via a DC voltage down the IF line The FT290R is set up with the perfect solution ... 9 Volts down the coax on transmit The IC202 is the reverse but easily modified to the same standard by placing a 4.7K resistor from the Tx rail to the antenna connector. The Europeans have adopted this as a psuedo standard.

Sequencing of Transmit and Receive stages helps keep relays and devices safe when using a high power. Circuits exist which give a few 100mS of delay. Actual switching of RF between the TX & Rx stages requires safety features. You must be able to sink about 3watts of RF from the transmitter. You must limit the amount of RF the receiver can see, usually done with back-to-back PIN diodes Switching between the two ports can be done with a relay or PIN diodes (quicker)

Another safety feature is perhaps a 8-watt low ohm resistor as an RF fuse before the switching circuit This may help when you accidentally connect 25 watts to the same port! To stop inadvertent cable swapping disasters I use TNC connectors for all IF connections on transverters TNC's seem to be more robust that the average BNC too And while on connectors I recommend that the polarity of IC202 & FT290R power plugs be reversed to what is considered the norm today, the outer being at negative potential . Many a fuse has been blown by a loose DC lead hitting a coax connector!

ar

HF Predictions

by Evan Jarman VK3ANI
34 Andale Court Blackburn Vic 3130

These graphs show the predicted diurnal variation of key frequencies for the nominated circuits.

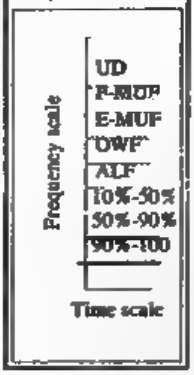
These frequencies as identified in the legend are:-

- Upper Decile (F-layer)
- F-layer Maximum Usable Frequency
- E-layer Maximum Usable Frequency
- Optimum Working Frequency (F-layer)
- Absorption Limiting Frequency (D region)

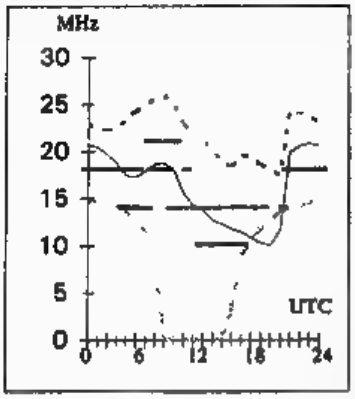
Shown hourly are the highest frequency amateur bands in ranges between these key frequencies, when usable. The path, propagation mode and Australian terminal bearing are also given for each circuit.

These predictions were made with the Ionospheric Prediction Service program: ASAPS Version 4

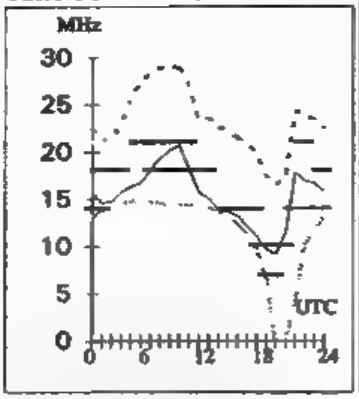
June 2001
T index: 113



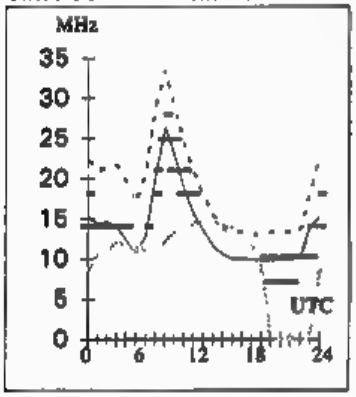
Adelaide-Achorage 30
First F 0-5 Shor 12466 km



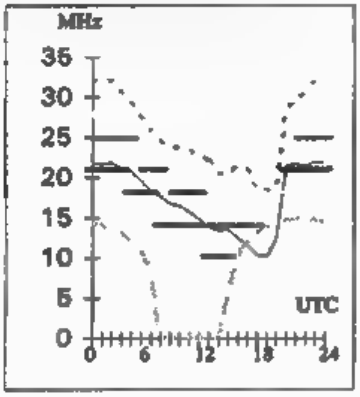
Brisbane-Berne 315
First F 0-5 Shor 16321 km



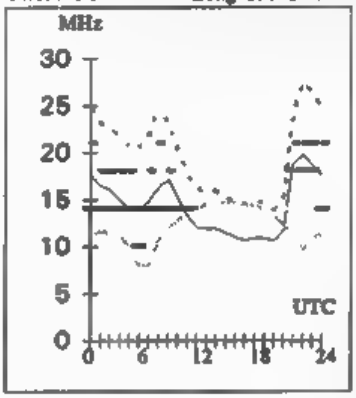
Adelaide-Dakar 238
First F 0-5 Shor 16724 km



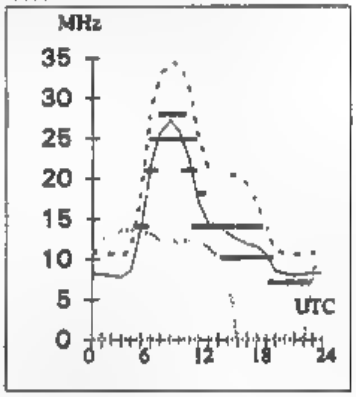
Brisbane-Los Angeles 59
Second 4F3-8 4E0 Shor 11564 km



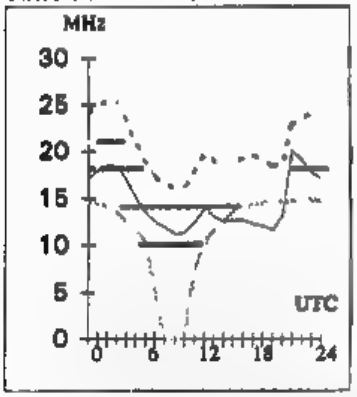
Canberra-London 136
First F 0-5 Long 23042 km



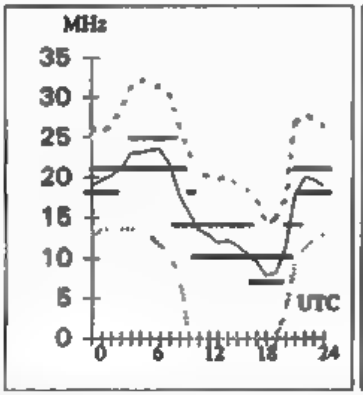
Darwin-Capetown 231
Second 4F3-5 4E0 Shor 11221 km



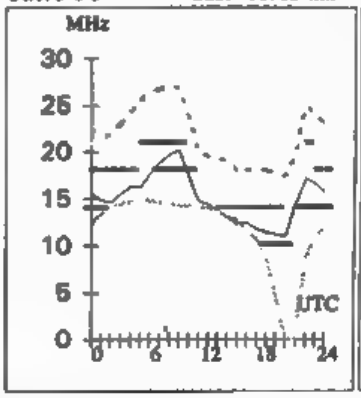
Adelaide-Ottawa 58
First F 0-5 Shor 16901 km



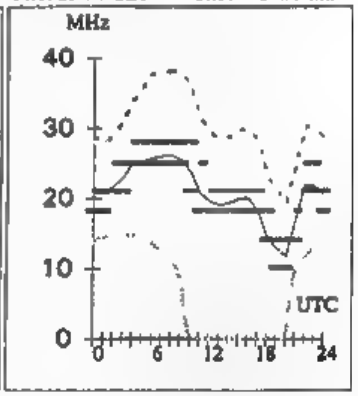
Brisbane-Osaka 344
Second 3F6-12 3E0 Shor 7149 km



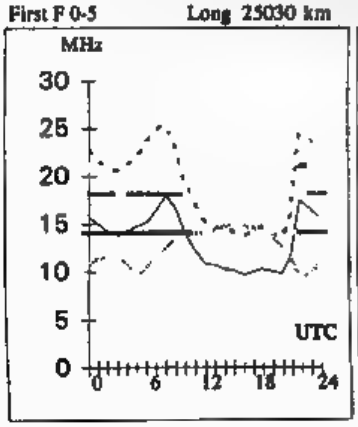
Canberra-London 316
First F 0-5 Shor 16982 km



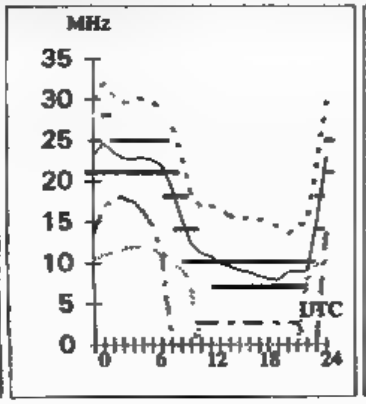
Darwin-Tokyo 10
First 2F4-9 2E0 Shor 5426 km



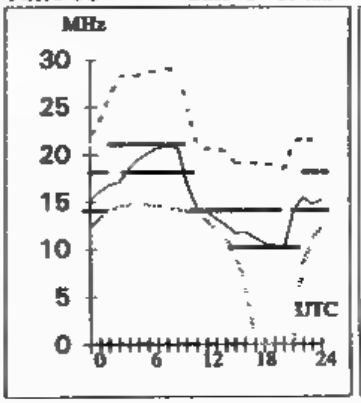
Adelaide-Stockholm 142
First F 0-5 Long 25030 km



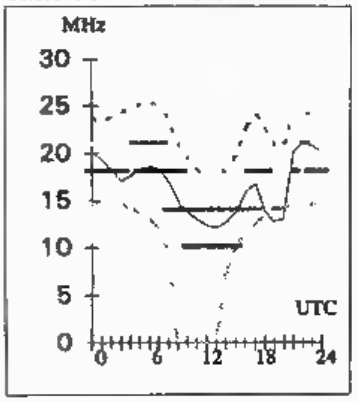
Brisbane-Singapore 293
Second 3F9-12 3E0 Shor 6147 km



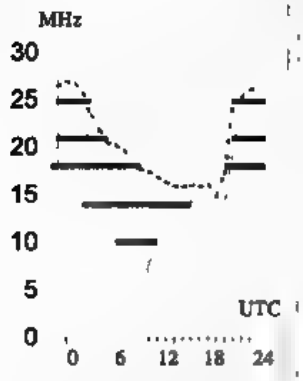
Canberra-Moscow 319
First F 0-5 Shor 14451 km



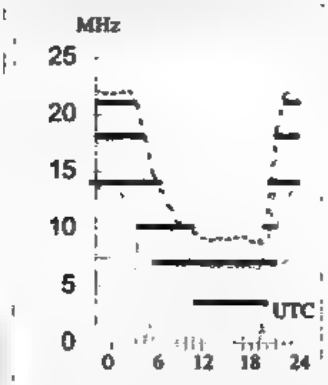
Darwin-Vancouver 42
First F 0-5 Shor 12212 km



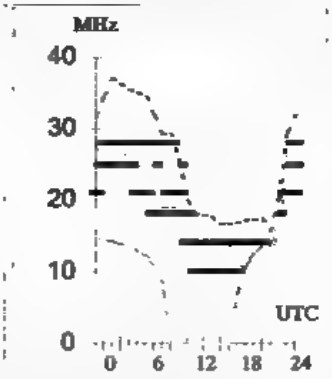
Hobart-Boston 78
First F 0-5 Short 6895 km



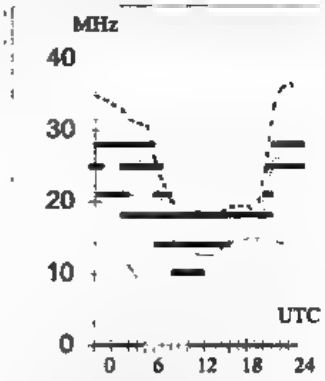
Melbourne-Auckland 97
Second 2F18-19 2E Short 2623 km



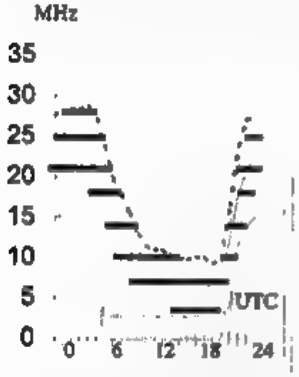
Perth-Honolulu 70
Second 4F4-8 4E0 Short 10905 km



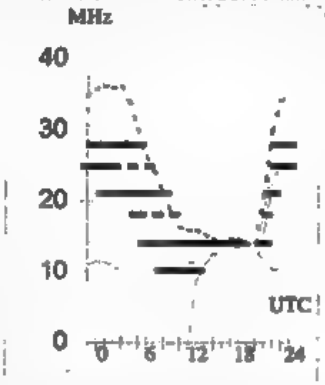
Sydney-Miami 86
First F 0-5 Short 15026 km



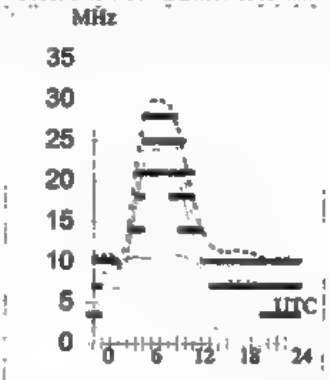
Hobart-Christchurch ##
First 1F9-10 1E0 Short 2040 km



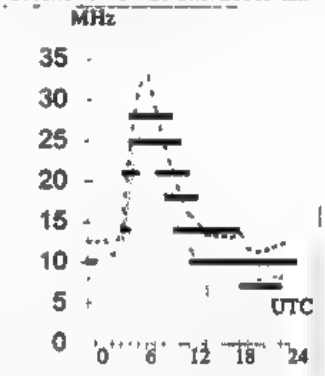
Melbourne-Lima ##
First F 0-5 Short 12950 km



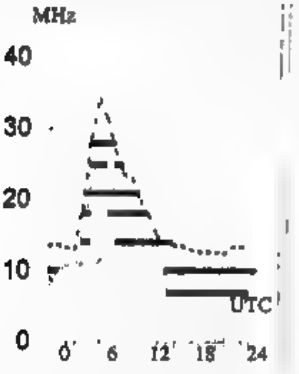
Perth-Johannesburg ##
Second 4F8-10 4E0 Short 8315 km



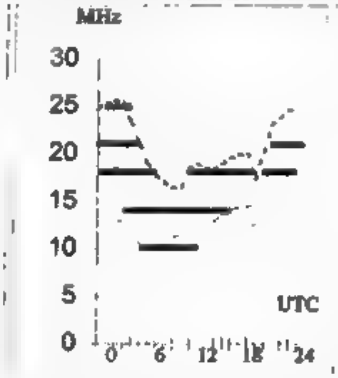
Sydney-Pretoria ##
Second 4F4-5 4E0 Short 11063 km



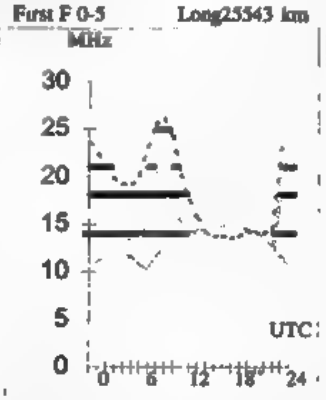
Hobart-Lusaka ##
Second 4F4-5 4E0 Short 11045 km



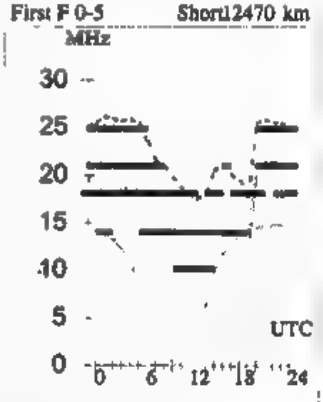
Melbourne-Montreal 62
First F 0-5 Short 16731 km



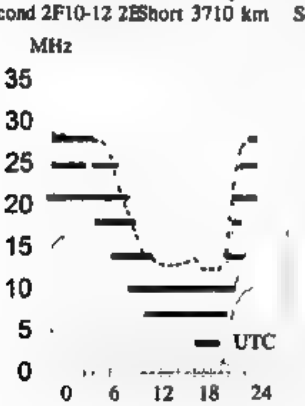
Perth-London ##
First F 0-5 Long 25543 km



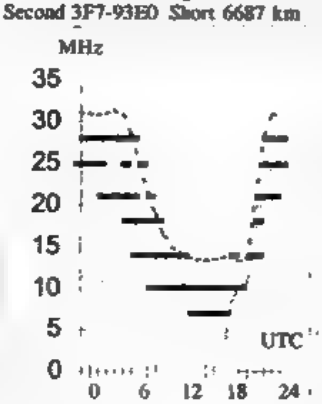
Sydney-Seattle 47
First F 0-5 Short 12470 km



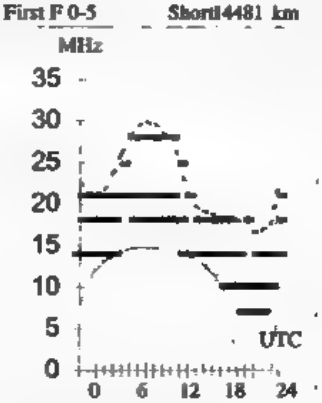
Hobart-Port Moresby 0
Second 2F10-12 2E Short 3710 km



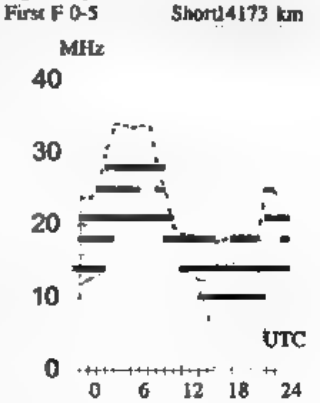
Melbourne-Papeete 90
Second 3F7-9 3E0 Short 6687 km



Perth-London ##
First F 0-5 Short 14481 km



Sydney-Tel Aviv ##
First F 0-5 Short 14173 km



HAMADS

- Hamads may be submitted by email or on the form on the reverse of your current Amateur Radio address flysheet. Please print carefully, especially where case or numerals are critical.
- Please submit separate forms for For Sale and Wanted items, and be sure to include your name, address and telephone number (including STD code) if you do not use the flysheet.
- Eight lines (forty words) per issue free to all WIA members, ninth and tenth lines for name and address. Commercial rates apply for non-members.
- Deceased estates Hamads will be published in full, even if the ad is not fully radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.
- QTHR means the address is correct in the current WIA Call Book.
- Ordinary Hamads from members who are deemed to be in general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being re-sold for merchandising purposes.
- Commercial advertising (Trade Hamads) are pre-payable at $25.00 for four lines (twenty words), plus $2.25 per line (or part thereof), with a minimum charge of $25.00. Cheques are to be made out to: WIA Hamads.
- Copy should be typed or in block letters, and be received by the deadlines shown on page 1 of each issue of Amateur Radio, at:

Email: *newsl@webtime.com.au* **Fax:** *03 9756 7031*
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Please send your Hamad by ONE method only (email preferred)

FOR SALE - ACT

• ICOM IC-728 HF transceiver 100 watt vgc $440, Tektronix 7704A oscilloscope 250 MHz vgc $360. VK1VP QTHR, Phone 02 6249 6348

FOR SALE - NSW

• Valves. Four boxes of new and use valves for sale. Includes 807, 5R4GY, 12AX7, 6AU7, 6J7G, 6V6G, etc. Any offers considered. Ring for full list. John, VK2WW, Phone 02 9546 1927

• Yaesu FT-101E $280. Yaesu FT-920 $1900. Alinco DR-135, 2 metre, $580. Jaytech power supply $300. GAP Challenger aerial still in box, $550. All in excellent condition. I will consider all reasonable offers as I must sell. Glenn, Phone 02 4965 7727

• Kenwood TS50 mint condition $1000. Peter VK2BZA, Phone 02 6585 5349

• Yaesu FT-890 HF transceiver all HF bands and all modes, last of Yaesu's best, used for receive only VGC $900 Icom IC-T8A tri-band hand held transceiver 6m-2m-70cm softcase spk/mic AA battery back VGC $350. Chris VK2YMW QTHR, Phone 02 9487 2764 AH

• Kenwood TM733A FM dual bander, never used, $650. Call Ted, VK2JAU, Phone 02 4625 [illegible]

• Yaesu FT1000MP $3200 ono. Kenwood TS50 with Kenpro Speech Processor $1200 ono. Kenwood MC60 mike $150. Yaesu SP102 speaker $60 ono. Yaesu FC 102 Tuner $220 ono. Multi Band Vert 10m to 80m $120 ono., Cushcraft R7000 Vert 10m to 40m top cond $420 ono. Philip Reedman VK2QG Phone (H) 02 9626 3537 (M) 0419 297 996

WANTED - NSW

• Require late issue printed copy of American call book. State price including postage. VK2EVK QTHR, Phone 02 4388 3300

• Heathkit TX-1 (Apache), RX1 (Mohawk) and SB-10, also Hallicrafters SX-28 and matching transmitter. Greg VK2GWP Phone 02 4958 1541

FOR SALE - VIC

• HF, VHF and UHF antennas and accessories. Aluminium towers, HD wire, guys, insulators, TX tubes and transistors. Free cat. ATN antennas. Ray, Box 80 (Morrison St.), Birchip, 3483. Phone 03 5492 2224 Fax 03 5492 2666

• Oscilloscope BWD 509B s/n 20650 with handbook and spare 5UP1(F) CRO tube $400 ono. Allen VK3SM, Phone 03 9386 4406

• IC-24AT dual band 2m/70cm hand held, with heavy duty BP84 battery pack and ctcss option fitted. Complete with charger and book. $240.00 ono. 6 metre hand held with 2 channels - Rptr VK3RMS & simplex 53.500MHz. Complete with desk top charger $75.00 IC-T8A tri band hand held, in mint condition in original box $470.00 ono. Ian VK3AYK Phone (M) 0418 309 037

WANTED - VIC

• Circuit diagram or name of Australian agent for Datong electronic morse tutor model D70. John Christian VK3HJC Phone 03 5985 6678

• Yaesu 736R with 50 MHz Jim VK3AEF QTHR Phone 03 5391 3045 Fax 03 53913263

FOR SALE - QLD

• YAESU DVS 1 Digital voice memory unit,fits many Yaesu radios $35 new Ray VK4BLK, Phone 07 4939 2284

• Antenna: Spider multiband (USA) for mobile, maritime, residential with space restrictions. Vertical, four resonators (10 15 20 40) with patented tuning sleeves. about.2 lbs, height 6ft, anodized aluminium. Outstanding performance (balcony use 100W 177ctrs) request brochure! Rated 200W PEP with bracket, ball mount. 100ft 213U/50ohm coax. $300 ono. Hans L40370 (ex-HS1ALK) Phone 07 5479 4561.

• Deceased Estate. Yaesu FT707 $400 Yaesu FP707 P/S $200. Yaesu FC707 Tuner. $150. All good condx with manuals. Also 2 metre Yaesu FT230 with ext L/S for car. As new. $200. Ring 07 5578 2293 or email smokey2@fan.net.au. VK4KD QTHR

WANTED - QLD

• HF transceiver. Prefer Yaesu FT1012D, FT902DM or similar Kenwood TS530S or TS830S working or not. Yaesu FT 757Gxll or FT890, FT900 considered as well. Sell me your old or second rig, help me get back on air. John VK4SKY QTHR, PO Box 1166 Coolongatta QLD 4225. Phone (M) 0417 410 503 or email: benoel@fan.net.au

• Commodore 64 programs SSTV and other late modes with written instructions. VK4AXM, Phone 07 3287 5655

FOR SALE - SA

• Heathkit Collectors. Anyone interested in a Model FM-4V broadcast FM tuner of the early 60s vintage. Valve operated, no audio amp or speaker. In good condition and working. Best offer to take it off my hands. Keith VK5OQ QTHR, Phone 08 8280 7430

• Sel log periodic 10-30 MHz, 2m J Pole, Diamond SX-200 SWR power meter, 2 X CRO (oscilloscope) probes. VK5MAP Paul Phone 08 [illegible]

WANTED - SA

• Manual for Tetronix spectrum analyzer IL20. VK5ZST, Box 26, Two Wells, S.A. 5501. Phone 08 8520 2988

WANTED - WA

• Variable air capacitors for home brew projects. Ring Mon-Fri after 10.00 UTC, Phone 08 9771 1664.

WANTED - OFFSHORE

• VK9CC Andy needs HF transceiver for Cocos Island operation. Sell me your broken or cheap radio, anything considered. Prefer WARC band models - but I'm not that fussy! Only permament operator on Cocos Island now! Andrew VK9CC, c/- PO Box 251, Seven Hills, NSW 1730. email: Interis@netscape.net

MISCELLANEOUS

• The WIA QSL Collection (now Federal) requires QSLs. All types welcome, especially rare DX pictorial cards, special issue. Please contact the Hon Curator, Ken Matchett VK3TL, 4 Sunrise Hill Road, Montrose Vic 3765, tel. (03) 9728 5350

FOR SALE ELECTRONIC VALVES

If you are looking for valves you can contact, Gamini Liyadipitiya at email: gamini@ee.unsw.edu.au Small negotiated fee — first come first served.

• **AMIDON FERROMAGNETIC CORES:**

For all RF applications. Send business size SASE for data/price to RJ & US Imports, PO Box 431, Kiama NSW 2533 (no enquiries at office please. 14 Boanyo Ave Kiama). www.cyberelectric.net.au/~rjandusimports. Tower Communications, Perth.

Agencies at: Active Electronics Tas, Truscotts Electronic World, Melbourne and Mildura: Alpha Tango Products, Perth: Haven Electronics, Nowra

AR Over to You

Morse

I have been amused to read the views for and against the retention of CW as an examination requirement for a HF amateur licence. Amused because it appears from the published letters, which are emotional at times, to be assumed that we, already licensed amateurs, should determine the priorities that prospective amateurs should be examined on before entry into our ranks.

The truth of the matter is that it is the spectrum licensing authorities both local and world wide that set the required standard for gaining an amateur HF licence. The ability to send and receive Morse code manually has been an examination requirement by the ACA for granting a HF amateur licence. This is because the WARC meetings have determined, it would be useful for radio amateurs to have this skill in case they intercept a distress signal, possibly from a ship at sea.

Most modern ships navigate and communicate via satellite now, and don't even carry HF radio anymore even as a back up. I found this out to my surprise when I visited the radio room on a Holland America Line cruise I was on up in Alaska recently. The radio operators said that it was years since they had used CW on board.

The world's coastal radio stations don't monitor the maritime frequencies for CW anymore. So I do predict that the next WARC meeting will delete the requirement for CW to be an examinable subject for HF radio amateurs, because they don't need it anymore!

I say deleted, not banned as spark transmitters were. It will still be a legal mode of transmission and CW will no doubt be used in our ranks while ever we exist as licensed amateurs.

Neville Chivers VK2VO

Reform

I have been a member of the WIA VK5 Division since 1997. I am Membership Secretary for the Division. I am very aware of the decline in WIA membership over this time. I feel the WIA structure requires reform from top to bottom.

There are a number of areas, which could be improved to lift the image of the WIA. I have been critical of the structure of Divisional Broadcasts. I consider the VK7 to be the best currently available. My efforts to change the VK5 Broadcast format fell on deaf ears.

I also feel there are a number of "Old Boy Clubs" in the WIA, whose members have grown old in the WIA and do not want to change or let new blood in. I have personal experience of trying to effect change and being rebuffed.

I felt the article by John Bennett VK3ZA/VK2SIG in April 1999 AR on the WIA fading away was close to the mark. We need to get in contact with more young people so there is some one to hand Amateur radio on to.

I am very keen to see Amateur radio progress into the 21st Century; it is a magnificent hobby. I deplore the apparent lack of promotion of the hobby to the general community. I wonder if the 2001 group of Federal and Divisional Presidents will be able to do something about this.

I feel to revitalise the WIA the State Divisions have to go. I think their sometime very parochial views do us more harm than good.

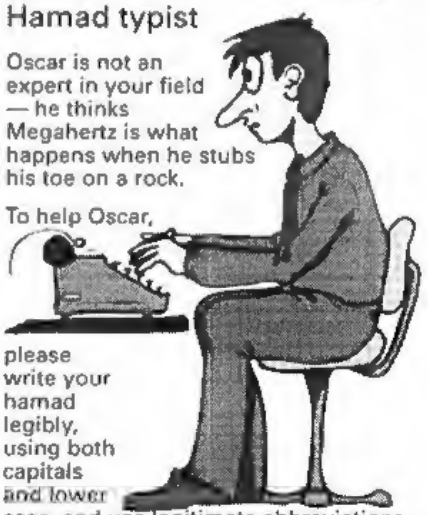
Yours

Michael Gell VK5ZLC.

more Over To You letters on page 56

PLEASE BE KIND TO OSCAR

Meet Mr Oscar Goldenboy, our Hamad typist



Oscar is not an expert in your field — he thinks Megahertz is what happens when he stubs his toe on a rock.

To help Oscar, please write your hamad legibly, using both capitals and lower case, and use legitimate abbreviations.

This will reduce the chance of errors being published, which incoveniences everyone.

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Over to You

Note 1 Views expressed in letters are those of the authors and do not necessarily represent the policy of the WIA.
2. Some of the letters may be shortened to allow more letters to be published.

National QSL and WIA

Hello All,

My purpose of this correspondence is to offer a few comments and observations on recent changes to the Outward QSL service being provided by the WIAQ, and the indirect side effects that these changes are likely to have on all Divisions of the WIA.

Members of all WIA Divisions will be interested in a debate taking place in VK4 on the provision of the outward QSL service. It is good to see the very thoughtful discussion taking place and the real effort to find a practical solution to issues concerning the WIAQ outward QSL service, and the desire to improve services for members of all WIA Divisions.

A major problem has surfaced in VK4 with the perception of excessive fees being set by VK4 for Outward QSL services. High volume users of the service are able to send their own package of cards to Japan and other destinations for less than five cents per card. The same users are prepared to either hold cards for other destinations or pool with other amateur licensees. It would be of little concern where that pool is formed - be it in VK4, VK2, or any other Division of the WIA. There are no surprises why VK4 members reacted when the WIAQ set a price of ten cents per card - regardless of destination.

The survival of the WIA largely rests on the ability to deliver a range of new and improved services. Any deterioration of an existing service, used by any segment of the membership, will have an adverse impact on all other segments of the membership in all Divisions. Re-phrased in a positive way, an improvement in any service for any membership segment will help retain and grow membership, and in this way benefit all segments of the membership. The immediate objective is to gain a win-win solution for all members.

WIAQ members are conscious of the fact that the WIAQ subsidises the provision of a range of valued services that are used by different segments of the membership. Members who use the Outward QSL service have, for a long time, accepted the concept that the user should pay a 'reasonable' fee to meet the cost of services provided. However, that segment is not prepared to accept reasons why more than full cost recovery is being applied to the QSL service. The higher fees generate further difficult questions about the extent to which some services are cross subsidising other services, and about how cost effectively the WIAQ is now providing an Outward QSL service.

The resolution of the problem rests on two issues: the extent to which any service should be subsidised by membership subscriptions - particularly the QSL service; and how the service can be delivered in a more cost effective manner.

There are no easy answers to the first question. There is a strong case to argue that the QSL service should benefit from some subsidisation - particularly when other services are subsidised to some extent. After all, this should be a major benefit of being a WIA member. There is also a good argument to say that the service should not place a disproportionate drain on membership funds. The WIAQ Divisional council needs to quickly determine a reasonable balance between the two arguments.

The second question is relatively easier to address. The main thrust of a generous offer from VK2 and a proposed motion from VK4 is to provide a more cost-effective method of service delivery.

Effective service delivery is achieved by providing different grades of service for different destinations. For example: High Grade Service for high volume destinations can be provided for delivery within a specified time frame for no more than five cents per card. Medium Grade Service for low volume destinations can be effectively provided by a national WIA pool for delivery within a longer specified time frame at a higher price.

Non WIA members could have access to the medium grade service for a premium price that makes a positive financial contribution to the WIA service provider and at the same time provides are more cost effective method of delivery for all amateur licensees.

The question of effective parcel sizes is best determined by the QSL service provider. The distribution of workload for the high-grade service would be best handled by each Division, and would provide convenient access for Divisional members. Each Division could forward cards for the medium grade service to the national pool. Any delay caused by forwarding and double handling of low volume cards would be relatively small in comparison to the time required to accumulate a viable parcel.

Returning to the subsidisation issue. From a practical implementation perspective, the basic accounting process would be conveniently managed if Divisions take responsibility for the High Grade Service, and the national WIA takes responsibility for subsidising the Medium Grade Service - regardless of where the national pool resides.

With regard to any proposed survey, we already have a clear understanding of a substantial segment of membership dissatisfaction with recent changes to the pricing of the WIAQ outward QSL service. A further membership survey on these issues is likely to generate further heat and less likely to contribute to a win-win outcome. It would be difficult to see why the QSL service should be singled out for a survey on the underlying question of cross subsidisation for any membership service.

As a Director of the Federal WIA, I would be pleased to support a presentation for adoption of the approach outlined in this correspondence at the next federal convention to be held in April this year.

Kind regards, John Loftus, Director WIA

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